

## INFANT AND FETAL MORTALITY

### INTRODUCTION

An infant death is a death within the first year of life. Infant deaths which occur in the first 27 days of life are classified as neonatal, while those occurring after the 27<sup>th</sup> day are considered postneonatal. Therefore, infant mortality is the sum of neonatal plus postneonatal deaths. Fetal death, which is also referred to as stillbirth or miscarriage, is defined as death prior to the complete expulsion or extraction from its mother of a product of conception where the fetus shows no signs of life such as breathing or beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. The State of New Jersey only requires the reporting of fetal deaths at 20 weeks gestation or more. Therefore, for the purpose of this report, fetal deaths are defined as fetal death at 20 weeks or more. Additionally, fetal deaths in this report measure spontaneous fetal deaths. Induced or intentional terminations of pregnancy, or abortions, are measured separately and are not included in this report. Perinatal mortality, for purposes of this report, is the sum of fetal deaths of 20 or more weeks gestation plus neonatal deaths. The infant mortality rate is a ratio of infant deaths to live births. The fetal and perinatal mortality rates are slightly different, as they include fetal deaths as well as live births in the denominator.

### OVERVIEW

In 2003, there were 662 infant deaths and 756 fetal deaths among New Jersey residents. Of the infant deaths, 476 were in the neonatal period. Perinatal mortality is defined as fetal plus neonatal deaths, so there were 1,232 perinatal deaths.

Between 1993 and 2003, the infant mortality rate in New Jersey decreased by one-third, from 8.4 to 5.7 deaths per 1,000 births. The neonatal mortality rate decreased 29% to 4.1 and the postneonatal rate decreased 41% to 1.6 deaths per 1,000 births. A similar decline did not occur with fetal mortality, and by 1997 the fetal mortality rate exceeded the infant mortality rate. In 2003, the fetal mortality rate was 6.4 per 1,000 births plus fetal deaths of 20 or more weeks gestation. The perinatal mortality rate decreased 14% from 1993 to 2003 and was 10.5 per 1,000 births plus fetal deaths in 2003 (Table IF1 and Figures IF1-IF3).

Among the 14 counties with enough infant deaths in 2003 to calculate a reliable rate, rates ranged from 3.0 in Monmouth County to 11.6 in Cumberland County. Fetal mortality rates ranged from 4.4 in Morris County to 11.1 in Essex County among counties with reliable rates. Of the 16 counties with reliable perinatal mortality rates, rates ranged from 6.7 in Somerset County to 16.7 in Essex County (Table IF2).

Of the 1,418 infant and fetal deaths in 2003, 1,232 (87%) occurred in the perinatal period between 20 weeks gestation and 27 days of life. It is useful to examine perinatal mortality factors to gain more information than what is available from infant death or fetal death statistics alone. The Black perinatal mortality rate (21.4) was twice that of the population as a whole. The rate among Hispanics (10.5) was equal to the overall rate, while rates among Whites (7.4) and Asians/Pacific Islanders (8.4) were slightly lower. Perinatal mortality rates were highest among the youngest (12.9) and the oldest (12.6) mothers. Women aged 30-34 years experienced the lowest perinatal mortality rate (8.6) in 2003. The pattern was the same for Whites, but not for Blacks or Hispanics. Among Blacks, the highest rates were among those aged 35-39 years (26.4) and 25-29 years (23.0) and the lowest rate (18.0) was among those aged 20-24 years. Among Hispanics, those aged 35-39 (13.0) and 30-34 (11.5) years had the highest rates and those aged 25-29 years had the lowest rate (9.0). Low numbers of perinatal deaths among Asians/Pacific Islanders hinders analysis by age and other characteristics (Table IF3).

The perinatal mortality rate among unmarried mothers (15.1) was nearly double the rate among married mothers (8.3). The marriage effect was most pronounced among Whites (10.9 vs. 6.7) and least marked among Hispanics (11.2 vs. 9.7). Multiples (twins, triplets, etc.) were four times more likely to die in the perinatal period than singletons (36.7 deaths per 1,000 vs. 9.0). The

affect of plurality was more extreme among Hispanics and Whites and less evident among Blacks. While there were slight differences based on trimester of prenatal care onset, complete lack of prenatal care had a substantial affect on perinatal mortality. The perinatal mortality rate among those who received prenatal care was 9.0 while the rate among those who did not receive care was 64.4, a difference of over 700%. Rates were higher for mothers who smoked during pregnancy (15.7) than among those who did not (10.0) (Table IF3).

The most influential factor in perinatal mortality was length of gestation. More than half of those delivered prior to 28 weeks gestation died in the perinatal period (569.6 per 1,000). Between 28 and 31 weeks gestation, the rate decreased dramatically to 75.8. At 32-36 weeks gestation, the rate declined further to 17.4 and was 1.9 for those delivered full-term (after 36 weeks gestation). Similar patterns were exhibited among all races/ethnicities. Birth/delivery weight is closely tied to gestational length. Over one-third of those weighing less than 1,500 grams at delivery died in the perinatal period (349.0 per 1,000). The rate was 19.7 for those weighing 1,500-2,499 grams and 1.8 for those weighing 2,500 grams or more. The pattern was the same for all races/ethnicities (Table IF3).

The leading causes of perinatal mortality in 2003 were fetal death of unspecified cause (211 deaths); placenta, cord, and membrane complications (210); short gestation and low birth weight (192); maternal complications of pregnancy (184); and congenital anomalies (137). Combined, these five causes accounted for more than three-quarters of perinatal deaths. No cause of death was given on 86 records (7%), so it is likely that even more deaths were attributable to those five causes (Table IF4).

## **INFANT MORTALITY**

### ***Race/ethnicity of mother***

Infant mortality rates decreased among all races/ethnicities between 1993 and 2003, yet the rate among Black mothers remained more than twice the rate for any other race/ethnicity. In 2003, there were 12.0 infant deaths per 1,000 births to Black women. The rates were 3.5 for Whites, 5.2 for Hispanics, and 4.8 for Asians/Pacific Islanders (Table I1 and Figure I1). Thirty-five percent of Black infant deaths were in the postneonatal period compared to 26% for Whites, 25% for Hispanics, and 21% for Asians/Pacific Islanders (Table I10).

### ***Age of mother***

Infant mortality rates decreased among all age groups between 1993 and 2003. Infant mortality rates were negatively correlated with age except for the oldest mothers. Rates in 2003 declined from a high of 9.2 for mothers under 20 years old to a low of 3.6 for those aged 35-39 years, before rising to 6.6 for mothers aged 40-44 years. (Table I2 and Figure I2).

While infant mortality rates declined with increasing age up through 39 for other races/ethnicities, the same was not true for Black mothers. Rates increased from ages 20 to 34 with the highest rate (14.3) occurring among mothers aged 30-34 (Table I10).

### ***Marital status***

Although rates decreased more for unmarried mothers between 1993 and 2003, the infant mortality rate among unmarried mothers was still more than double the rate among married mothers in 2003. The rate was 3.9 per 1,000 births among married mothers and 8.8 among unmarried mothers (Table I3 and Figure I3). The difference between married and unmarried mothers was less marked among Blacks and Hispanics. Rates among unmarried Black and Hispanic mothers were 1.4 and 1.3 times higher, respectively, than for their married counterparts (Table I10).

### ***Multiple births***

The infant mortality rate among singletons decreased 40% between 1993 and 2003 and stood at 4.4 per 1,000 births in 2003. The rate among multiples decreased 30% and was 25.9 in 2003. The infant mortality rate among multiple births was nearly six times as high as that among

singletons (Table I4 and Figure I4). The difference was more extreme among Whites (8 times higher) and Hispanics (10 times higher) and less extreme among Blacks (3 times higher) (Table I10).

#### ***Prenatal care***

The infant mortality rate among women who received no prenatal care was six times higher than the rate among those who did receive care. In 2003, rates were 4.7 for first trimester prenatal care onset, 5.5 for second and third trimester, and 30.9 for no prenatal care. Between 1993 and 2003, there was a 44% decrease in the infant mortality rate among mothers who received no prenatal care. Less dramatic decreases occurred for first, second, and third trimester prenatal care onset (Table I5 and Figure I5).

#### ***Tobacco use during pregnancy***

The infant mortality rate was higher among mothers who reported smoking. While there was only a slight difference in infant mortality rates for White smokers and non-smokers, Black mothers who smoked were twice as likely to experience an infant death (Table I10). Similar declines in infant mortality rates from 1993 to 2003 were seen among mothers who did and did not use tobacco during pregnancy. The rate remained higher among smokers (8.3 deaths per 1,000 births) than among non-smokers (5.1) in 2003 (Table I6 and Figure I6).

#### ***Period of gestation***

Length of gestation was negatively related to the infant mortality rate. While only 1.4 out of every 1,000 full-term births died within the first year of life, the rate was 8.4 for those born between 32 and 36 weeks gestation. For those born prior to 32 weeks gestation, the infant mortality rate was 195.2 per 1,000 births or nearly 20% of those births (Table I7 and Figure I7). Prematurity had a slightly greater effect on infant mortality among Whites and a lesser effect among Blacks as compared to the population as a whole (Table I10). While infant mortality rates decreased by one-quarter among those delivered preterm (prior to 37 weeks gestation), rates among full-term deliveries decreased by more than half (Table I7 and Figure I7).

#### ***Birth weight***

Birth weight and length of gestation are closely related. While mortality rates decreased about 30% among infants of low birth weight (less than 2,500 grams), rates among normal weight infants decreased by more than half. While only 1.3 out of every 1,000 normal weight births died within the first year of life, the rate was 10.6 for those weighing between 1,500 and 2,499 grams. For those of very low birth weight (less than 1,500 grams), the infant mortality rate was 212.1 per 1,000 births, or more than one-fifth of those births (Table I8 and Figure I8). Very low birth weight had a greater effect on infant mortality among Whites and Hispanics and a lesser effect among Blacks as compared to the population as a whole (Table I10).

#### ***Sex***

Infant mortality rates for males remained slightly higher than rates for females throughout the period from 1993 to 2003. In 2003, the infant mortality rate was 6.0 for males and 5.3 for females (Table I9 and Figure I9).

#### ***Medical risk factors***

The most commonly reported medical risk factors on birth certificates of infant deaths in 2003 were diabetes (29 deaths), acute or chronic lung disease (28), hydramnios/oligohydramnios (25), incompetent cervix (24), and previous preterm or small-for-gestational-age infant (23). Of those, the highest infant mortality rate was associated with incompetent cervix (39.3 deaths per 1,000 births) which is characterized by painless dilation of the cervix in the second trimester or early in the third trimester of pregnancy, with premature expulsion of membranes through the cervix and ballooning of the membranes into the vagina, followed by rupture of the membranes and subsequent expulsion of the fetus (Table I11 and Figure I10).

#### ***Causes of death***

Short gestation/low birth weight and congenital anomalies have been the two leading causes of infant death since at least 1999. In 2003, 40% of infant deaths were attributed to those two causes. SIDS and respiratory distress have been the third and fourth leading causes since 1999. In 2003, the fifth leading cause was a tie between maternal complications of pregnancy and bacterial sepsis (Table I12 and Figures I11 and I12).

The leading causes of neonatal mortality in 2003 were short gestation/low birth weight (159 deaths) and congenital anomalies (78). SIDS (32 deaths) and congenital anomalies (27) were the leading causes of postneonatal deaths (Table I13).

The two leading causes of infant death were the same for all races/ethnicities in 2003: short gestation/low birth weight and congenital anomalies. For Whites, the third leading cause was a tie between SIDS and maternal complications of pregnancy. For Blacks, it was SIDS. For Hispanics, there was a three-way tie between SIDS, respiratory distress, and kidney disorders. For Asians and Pacific Islanders, the third leading cause of infant death was a tie between respiratory distress and maternal complications of pregnancy (Table I14).

## **FETAL MORTALITY**

### ***Race/ethnicity of mother***

Fetal mortality rates decreased substantially among Hispanics and Asians/Pacific Islanders between 1993 and 2003, but remained virtually unchanged for Whites and increased among Blacks. Like infant mortality rates, the fetal mortality rate among Black mothers was more than twice the rate for any other race/ethnicity. In 2003, there were 13.8 fetal deaths per 1,000 births to Black women. The rates were 4.6 for Asians/Pacific Islanders, 4.8 for Whites, and 6.7 for Hispanics (Table F1 and Figure F1).

### ***Age of mother***

Fetal mortality rates were lowest for mothers aged 30-34 years (5.1 deaths per 1,000 births plus fetal deaths in 2003) and highest among mothers aged 40-44 years (7.9). There were no clear upward or downward fetal mortality rate trends among any age group between 1993 and 2003 (Table F2 and Figure F2).

### ***Marital status***

In 2003, the fetal mortality rate among unmarried mothers was 1.7 times higher than the rate among married mothers. The rate was 5.3 per 1,000 births plus fetal deaths among married mothers and 9.2 among unmarried mothers (Table F3 and Figure F3). As with infant mortality, the difference between married and unmarried mothers was less marked among Blacks and Hispanics. Rates among unmarried Black and Hispanic mothers were only 1.1 and 1.05 times higher, respectively, than for their married counterparts (Table F10).

### ***Multiple births***

There was no strong trend in fetal mortality rates among singletons or multiples between 1993 and 2003. The fetal mortality rate was 5.9 per 1,000 births plus fetal deaths for singletons and 17.0 for multiples in 2003. The rate for multiples was nearly three times higher than the rate among singletons (Table F4 and Figure F4) while the difference in plurality-specific rates was six-fold for infant deaths (Table I4 and Figure I4).

### ***Prenatal care***

The fetal mortality rate in 2003 among women who received no prenatal care was more than seven times higher than the rate among those who did receive care. Rates were 5.6 for first trimester prenatal care onset, 6.1 for second trimester, and 42.2 for no prenatal care. There was also no clear trend in fetal mortality rates by trimester of prenatal care onset between 1993 and 2003 (Table F5 and Figure F5).

### ***Tobacco use during pregnancy***

Since 2000 there has been a steady upward trend in fetal mortality rates among mothers who used tobacco during pregnancy. The rate was 10.3 deaths per 1,000 births plus fetal deaths among smokers and 6.3 among non-smokers in 2003 (Table F6 and Figure F6).

### ***Period of gestation***

In 2003, the fetal mortality rate was 336.5 deaths per 1,000 births plus fetal deaths delivered between 20 and 27 weeks gestation, 58.9 for 28-31 weeks, 13.5 for 32-36 weeks, and 1.3 for 37 or more weeks gestation (Table F7 and Figure F7). While fetal deaths of 20-27 weeks gestation comprise about half of White, Hispanic, and Asian/Pacific Islander fetal deaths, they comprise two-thirds of Black fetal deaths (Table F10). While there was no clear fetal mortality rate trend among those delivered after 27 weeks of gestation, there was a steady climb during 1993-2002 among those delivered between 20 and 27 weeks. The rate decreased in 2003 for that group; however it still remained far higher than that of those delivered after 27 weeks gestation (Table F7 and Figure F7).

### ***Birth weight***

While there was no clear fetal mortality rate trend among those weighing 1,500 grams or more at delivery, there was a fairly steady increase in the rate between 1993 and 2002 among those weighing less than 1,500 grams. The fetal mortality rate was 1.3 among those weighing 2,500 grams or more and 13.9 for those weighing between 1,500 and 2,499 grams. For those of very low delivery weight (less than 1,500 grams), the fetal mortality rate was 206.1 per 1,000 births plus fetal deaths (Table F8 and Figure F8). The proportion of fetal deaths which were of normal delivery weight varied by maternal race/ethnicity. While 10% of Black fetal deaths were of normal delivery weight, 25% of Hispanic, 21% of White, and 17% of Asian/Pacific Islander fetal deaths were (Table F10).

### ***Sex***

Like infant mortality rates, fetal mortality rates for males remained slightly higher than rates for females throughout the period from 1993 to 2003. In 2003, the fetal mortality rate was 6.6 for males and 6.1 for females (Table F9 and Figure F9).

### ***Medical risk factors***

The most commonly reported medical risk factors on fetal death certificates in 2003 were incompetent cervix (45 deaths), pregnancy-associated hypertension (31), previous preterm or small-for-gestational-age infant (28), diabetes (27), sexually transmitted diseases (27), and chronic hypertension (23). Of those, the highest fetal mortality rate was associated with incompetent cervix (68.7 deaths per 1,000 births plus fetal deaths) (Table F11 and Figure F10).

### ***Causes of death***

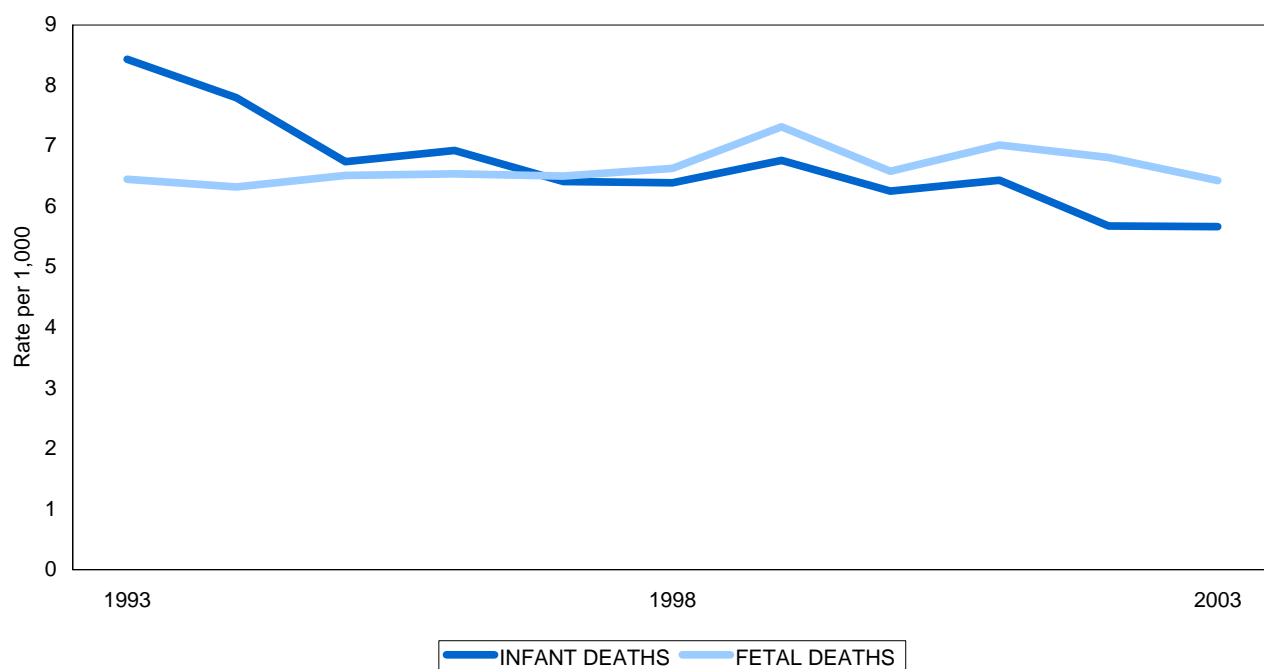
Fetal death of unspecified cause was the leading cause of fetal death in 2002 and 2003. Prior to 2002, placenta, cord, and membrane complications was the leading cause of fetal death. It was number two in 2003 and maternal complications of pregnancy was third. In 2003, 74% of fetal deaths were attributed to those three causes. Congenital anomalies has been the fourth leading cause since 1999. In 2003, the fifth leading cause was maternal complications that may be unrelated to this pregnancy (Table F12 and Figures F11 - F12).

The three leading causes of fetal death were the same for all races/ethnicities in 2003: fetal death of unspecified cause; placenta, cord, and membrane complications; and maternal complications of pregnancy. However, the ranking of those three varied slightly by race/ethnicity. For Whites, the leading cause was placenta, cord, and membrane complications. For Asians and Pacific Islanders, the leading cause of fetal death was a tie between placenta, cord, and membrane complications and maternal complications of pregnancy (Table F13).

**SUMMARY**

**DATA**

**FIGURE IF1. INFANT AND FETAL MORTALITY RATES  
NEW JERSEY, 1993-2003**



**TABLE IF1. INFANT, NEONATAL, POSTNEONATAL, FETAL, AND PERINATAL MORTALITY  
NEW JERSEY, 1993-2003**

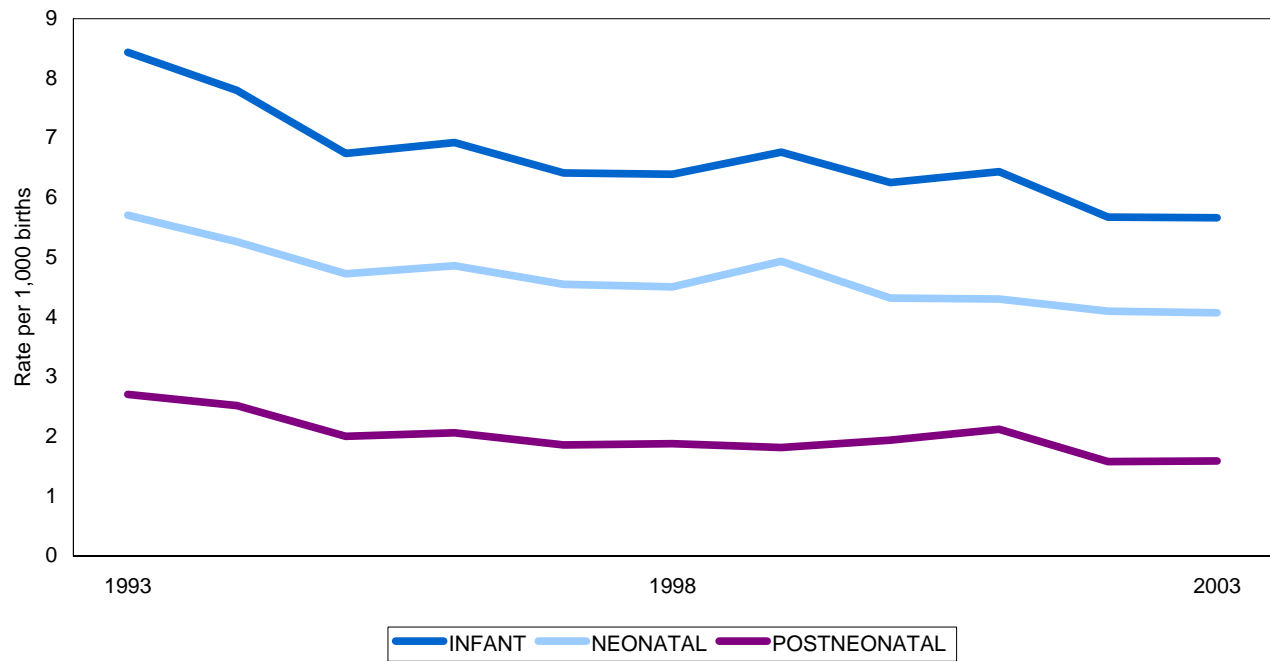
YEAR	INFANT		NEONATAL		POSTNEONATAL		FETAL		PERINATAL	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	995	8.4	673	5.7	319	2.7	766	6.5	1,439	12.1
1994	919	7.8	620	5.3	297	2.5	750	6.3	1,370	11.6
1995	776	6.7	544	4.7	231	2.0	755	6.5	1,299	11.2
1996	792	6.9	556	4.9	236	2.1	753	6.5	1,309	11.4
1997	727	6.4	516	4.6	211	1.9	742	6.5	1,258	11.0
1998	728	6.4	513	4.5	214	1.9	760	6.6	1,273	11.1
1999	770	6.8	562	4.9	207	1.8	839	7.3	1,401	12.2
2000	723	6.3	499	4.3	224	1.9	766	6.6	1,265	10.9
2001	745	6.4	498	4.3	246	2.1	818	7.0	1,316	11.3
2002	651	5.7	470	4.1	181	1.6	786	6.8	1,256	10.9
2003	662	5.7	476	4.1	186	1.6	756	6.4	1,232	10.5
Percent Change 1993-2003	-33.5	-32.8	-29.3	-28.6	-41.7	-41.1	-1.3	-0.4	-14.4	-13.6

Perinatal deaths are the sum of neonatal deaths plus fetal deaths.

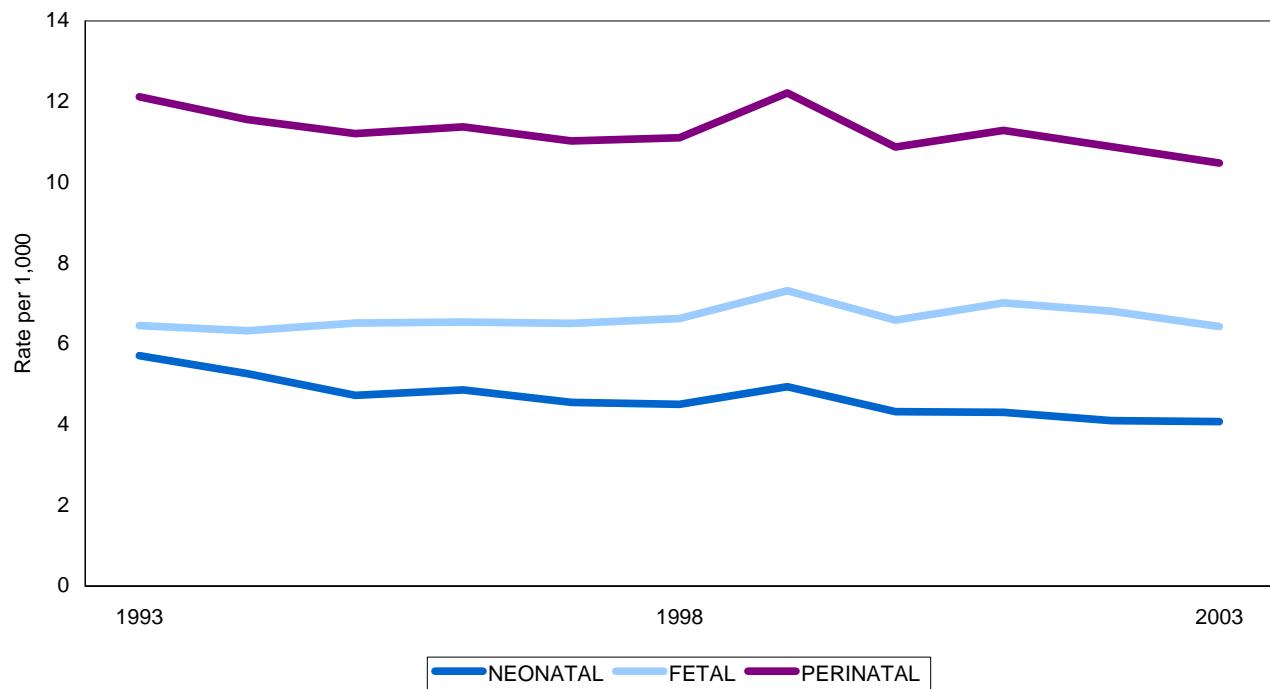
Infant, neonatal, and postneonatal mortality rates are calculated per 1,000 births.

Fetal and perinatal mortality rates are calculated per 1,000 births plus fetal deaths of 20+ weeks gestation.

**FIGURE IF2. INFANT, NEONATAL, AND POSTNEONATAL MORTALITY RATES  
NEW JERSEY, 1993-2003**



**FIGURE IF3. NEONATAL, FETAL, AND PERINATAL MORTALITY RATES  
NEW JERSEY, 1993-2003**





**TABLE IF2. INFANT, NEONATAL, POSTNEONATAL, FETAL, AND PERINATAL MORTALITY BY COUNTY  
NEW JERSEY, 2003**

COUNTY	INFANT		NEONATAL		POSTNEONATAL		FETAL		PERINATAL	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
ATLANTIC	21	6.1	16	**	5	**	29	8.3	45	12.9
BERGEN	40	3.7	32	3.0	8	**	58	5.4	90	8.3
BURLINGTON	26	4.7	19	**	7	**	32	5.8	51	9.1
CAMDEN	60	8.6	44	6.3	16	**	34	4.9	78	11.1
CAPE MAY	7	**	3	**	4	**	4	**	7	**
CUMBERLAND	25	11.6	18	**	7	**	16	**	34	15.5
ESSEX	113	9.3	70	5.8	43	3.5	136	11.1	206	16.7
GLOUCESTER	19	**	14	**	5	**	19	**	33	9.7
HUDSON	66	7.4	52	5.8	14	**	60	6.7	112	12.4
HUNTERDON	5	**	5	**	0	**	6	**	11	**
MERCER	28	6.2	19	**	9	**	47	10.3	66	14.4
MIDDLESEX	47	4.3	35	3.2	12	**	53	4.8	88	7.9
MONMOUTH	24	3.0	14	**	10	**	48	5.9	62	7.6
MORRIS	29	4.5	24	3.7	5	**	28	4.4	52	8.1
OCEAN	23	3.1	19	**	4	**	37	5.0	56	7.5
PASSAIC	52	6.7	33	4.3	19	**	40	5.1	73	9.4
SALEM	4	**	2	**	2	**	6	**	8	**
SOMERSET	12	**	10	**	2	**	20	4.5	30	6.7
SUSSEX	8	**	5	**	3	**	11	**	16	**
UNION	45	5.9	38	5.0	7	**	66	8.6	104	13.4
WARREN	8	**	4	**	4	**	6	**	10	**
NOT STATED	0	N/A	0	N/A	0	N/A	0	N/A	-	N/A
TOTAL	662	5.7	476	4.1	186	1.6	756	6.4	1,232	10.4

Perinatal deaths are the sum of neonatal deaths plus fetal deaths.

Infant, neonatal, and postneonatal mortality rates are computed per 1,000 county-specific births.

Fetal and perinatal mortality rates are computed per 1,000 county-specific births plus fetal deaths of 20 or more weeks gestation.

\*\* The number of deaths is too small to calculate a reliable rate.

**TABLE IF3. PERINATAL MORTALITY BY SELECTED CHARACTERISTICS AND RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 2003**

CHARACTERISTICS	TOTAL		WHITE		BLACK		HISPANIC		ASIAN/ PACIFIC ISLANDER	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
TOTAL	1,232	10.5	441	7.4	374	21.4	276	10.5	85	8.4
AGE OF MOTHER										
Under 20	94	12.9	17	**	46	19.3	29	9.3	0	**
20-24	231	11.9	59	9.1	80	18.0	75	10.2	13	**
25-29	286	10.0	100	7.5	95	23.0	63	9.0	24	7.3
30-34	318	8.6	144	6.4	74	19.8	62	11.5	28	7.3
35-39	202	9.8	93	7.1	57	26.4	36	13.0	14	**
40-44	56	12.6	26	9.5	17	**	6	**	5	**
MARITAL STATUS										
Married	664	8.3	349	6.7	112	18.3	118	9.7	77	8.0
Unmarried	518	15.1	88	10.9	253	22.3	157	11.2	8	**
PLURALITY										
Singleton	1,007	9.0	343	6.1	333	19.8	241	9.4	70	7.1
Multiple	192	36.7	98	29.7	40	58.1	35	52.2	15	**
TRIMESTER PRENATAL CARE BEGAN										
First	808	9.0	356	6.8	210	19.3	170	9.5	56	6.6
Second	173	10.0	37	7.3	66	15.1	56	8.7	12	**
Third	29	6.1	6	**	8	**	11	**	4	**
No Care	87	64.4	12	**	54	80.7	16	**	4	**
MATERNAL SMOKING DURING PREGNANCY										
Yes	141	15.7	58	10.3	68	34.3	14	**	0	**
No	1,026	10.0	372	7.1	293	19.2	259	10.4	85	8.6
CLINICAL ESTIMATE OF GESTATION										
<28 weeks	737	569.6	248	575.4	262	556.3	157	534.0	53	688.3
28-31 weeks	90	75.8	33	62.7	23	69.5	26	98.5	7	**
32-36 weeks	164	17.4	60	12.6	46	23.7	41	20.4	15	**
37+ weeks	193	1.9	92	1.8	39	2.7	51	2.2	10	**
BIRTH/DELIVERY WEIGHT (IN GRAMS)										
<1,500	823	349.0	273	286.8	289	379.3	184	377.0	61	469.2
1,500-2,499	147	19.7	65	18.8	32	18.4	34	22.2	13	**
2,500+	193	1.8	85	1.5	42	2.8	57	2.3	8	**

Perinatal deaths are the sum of neonatal deaths plus fetal deaths.

Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

Rates are computed per 1,000 characteristic-specific and race/ethnicity-specific births plus fetal deaths.

\*\* The number of deaths is too small to calculate a reliable rate.

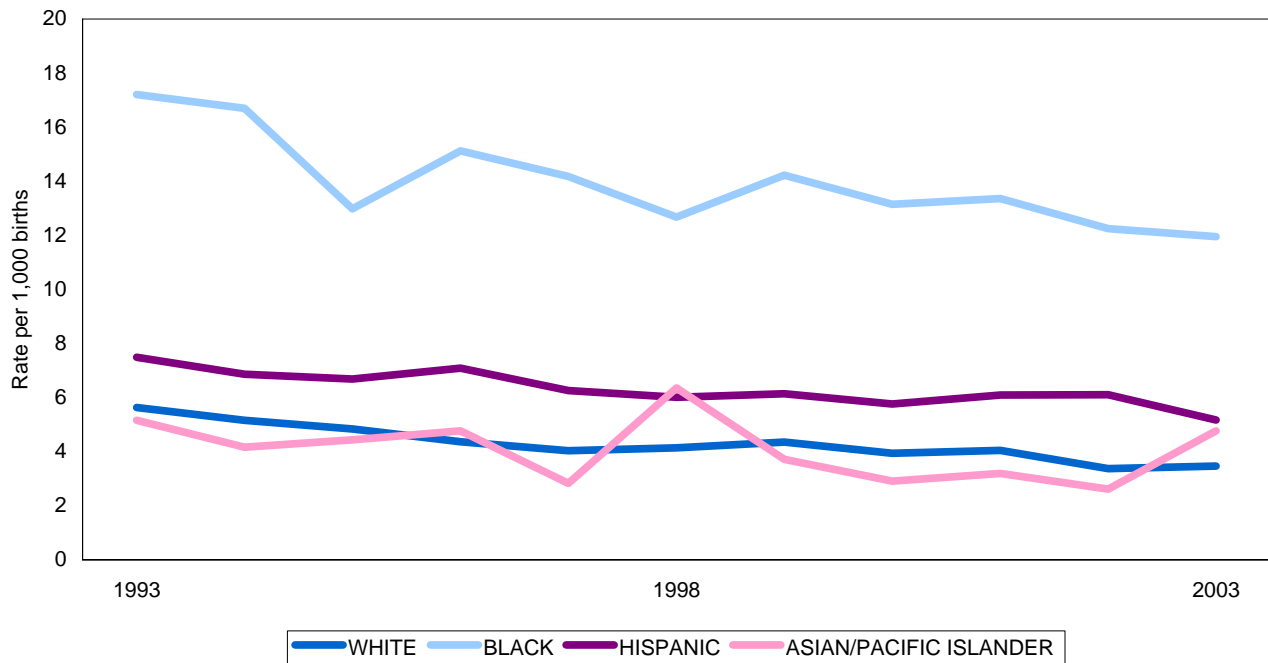
**TABLE IF4. LEADING CAUSES OF PERINATAL MORTALITY  
NEW JERSEY, 2003**

CAUSE OF DEATH	PERINATAL DEATHS		FETAL DEATHS		NEONATAL DEATHS	
	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER
FETAL DEATH OF UNSPECIFIED CAUSE	1	211	1	211		0
PLACENTA, CORD, AND MEMBRANE COMPLICATIONS	2	210	2	191	7	19
SHORT GESTATION/LOW BIRTH WEIGHT	3	192	6	33	1	159
MATERNAL COMPLICATIONS OF PREGNANCY	4	184	3	156	3	28
CONGENITAL ANOMALIES	5	137	4	59	2	78
MATERNAL COMPLICATIONS THAT MAY BE UNRELATED TO THIS PREGNANCY	6	38	5	34	14	4
RESPIRATORY DISTRESS	7	27		0	4	27
BACTERIAL SEPSIS	7	27		0	4	27
FETAL/NEONATAL HEMORRHAGE	9	22	13	2	6	20
INTRAUTERINE HYPOXIA/BIRTH ASPHYXIA	10	20	7	10	8	10

See Technical Notes for ICD-10 codes corresponding to cause groups.

# **INFANT MORTALITY DATA**

**FIGURE I1. INFANT MORTALITY RATES BY RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 1993-2003**



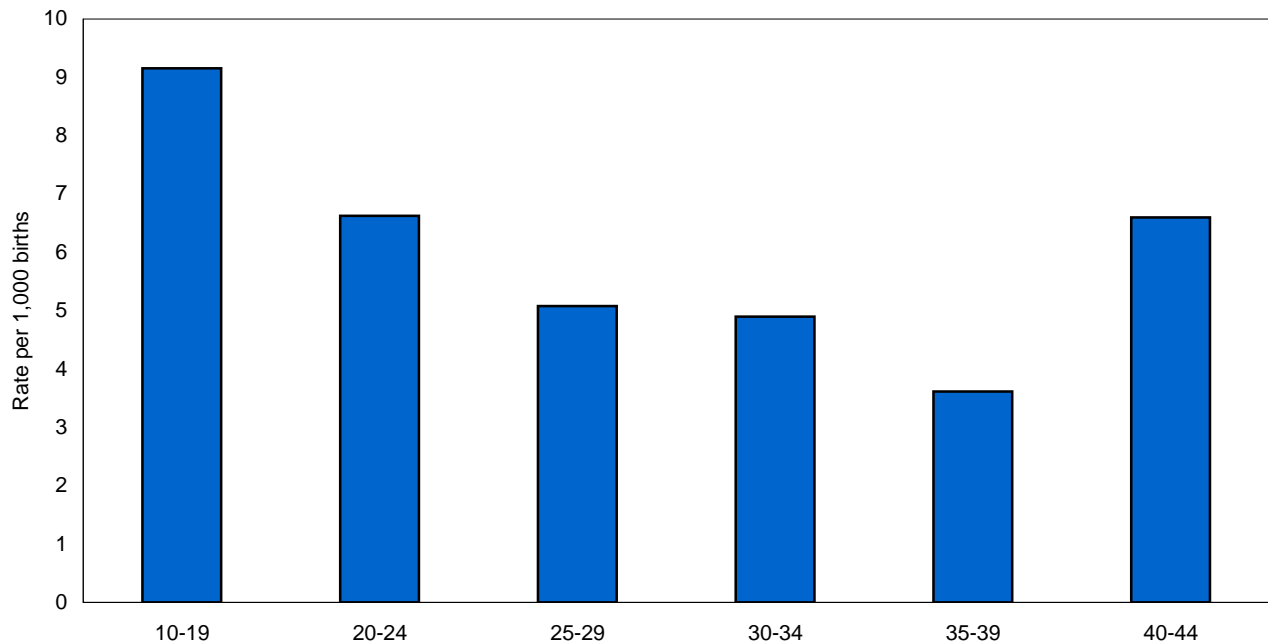
**TABLE I1. INFANT MORTALITY BY RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		WHITE		BLACK		HISPANIC		ASIAN/ PACIFIC ISLANDER	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	995	8.4	399	5.6	371	17.2	131	7.5	25	5.2
1994	919	7.8	362	5.2	357	16.7	122	6.9	21	4.2
1995	776	6.7	330	4.8	253	13.0	124	6.7	25	4.4
1996	792	6.9	288	4.4	288	15.1	136	7.1	32	4.8
1997	727	6.4	260	4.0	269	14.2	121	6.3	20	2.8
1998	728	6.4	264	4.1	240	12.7	121	6.0	47	6.4
1999	770	6.8	272	4.4	265	14.2	129	6.1	29	3.7
2000	723	6.3	245	3.9	246	13.2	127	5.8	26	2.9
2001	745	6.4	248	4.0	245	13.4	141	6.1	30	3.2
2002	651	5.7	201	3.4	216	12.2	148	6.1	25	2.6
2003	662	5.7	207	3.5	206	12.0	135	5.2	48	4.8
Percent Change 1993-2003										
	-33.5	-32.8	-48.1	-38.3	-44.5	-30.6	3.1	-31.0	92.0	-7.6

Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

Rates are calculated per 1,000 race/ethnicity-specific births.

**FIGURE 12. INFANT MORTALITY RATES BY AGE OF MOTHER  
NEW JERSEY, 2003**



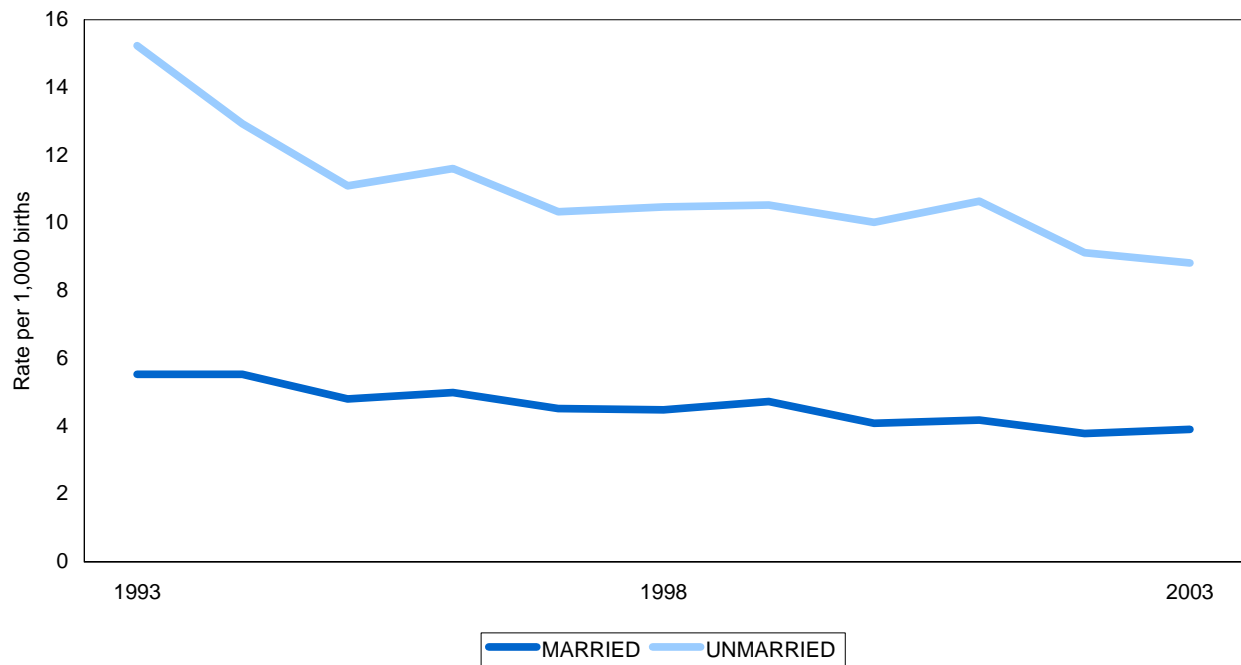
**TABLE 12. INFANT MORTALITY BY AGE OF MOTHER  
NEW JERSEY, 1993-2003**

YEAR	10-19		20-24		25-29		30-34		35-39		40-44	
	NO.	RATE	NO.	RATE	NO.	RATE	NO.	RATE	NO.	RATE	NO.	RATE
1993	131	14.0	199	9.6	267	7.7	224	6.3	97	6.4	21	8.9
1994	122	12.7	179	9.0	231	7.0	236	6.5	90	5.7	21	8.2
1995	103	11.0	151	8.1	193	6.1	180	5.0	100	6.1	16	**
1996	98	11.1	151	8.5	192	6.2	199	5.4	101	5.9	27	9.3
1997	84	9.5	144	8.2	157	5.2	182	5.0	99	5.7	17	**
1998	92	10.4	129	7.2	186	6.3	169	4.7	94	5.1	24	6.9
1999	74	8.8	136	7.4	183	6.4	201	5.7	91	4.8	29	7.9
2000	78	9.6	148	7.8	162	5.7	164	4.5	83	4.2	29	7.4
2001	85	10.9	140	7.2	156	5.5	172	4.7	104	5.2	39	9.6
2002	77	10.3	138	7.2	135	4.8	149	4.2	90	4.5	26	6.3
2003	66	9.2	128	6.6	144	5.1	180	4.9	74	3.6	29	6.6
Percent Change 1993-2003	-49.6	-34.7	-35.7	-30.8	-46.1	-34.3	-19.6	-22.2	-23.7	-43.9	38.1	-25.8

Rates are calculated per 1,000 maternal age-specific births.

\*\* The number of deaths is too small to calculate a reliable rate.

**FIGURE I3. INFANT MORTALITY RATES BY MARITAL STATUS OF MOTHER  
NEW JERSEY, 1993-2003**



**TABLE I3. INFANT MORTALITY BY MARITAL STATUS OF MOTHER  
NEW JERSEY, 1993-2003**

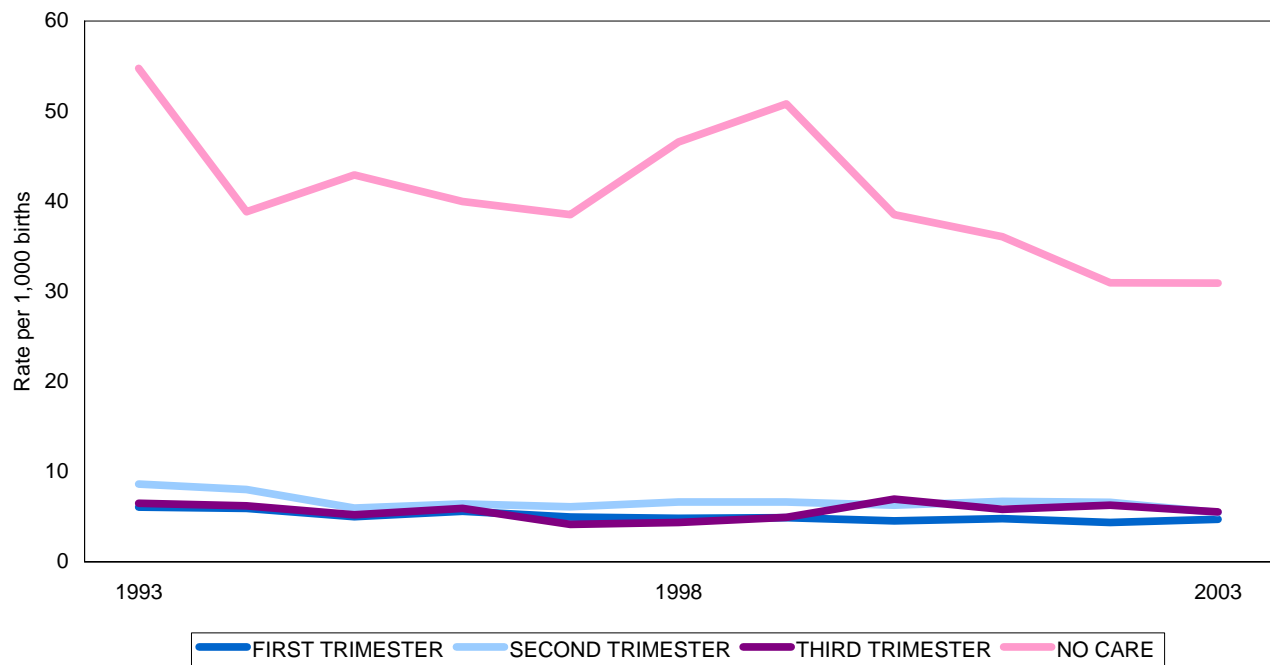
YEAR	TOTAL		MARRIED		UNMARRIED	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	995	8.4	477	5.5	483	15.2
1994	919	7.8	471	5.5	419	12.9
1995	776	6.7	403	4.8	346	11.1
1996	792	6.9	402	5.0	363	11.6
1997	727	6.4	359	4.5	324	10.3
1998	728	6.4	356	4.5	334	10.5
1999	770	6.8	374	4.7	336	10.5
2000	723	6.3	326	4.1	330	10.0
2001	745	6.4	333	4.2	355	10.6
2002	651	5.7	297	3.8	304	9.1
2003	662	5.7	312	3.9	299	8.8
Percent Change 1993-2003	-33.5	-32.8	-34.6	-29.4	-38.1	-42.1

Rates are calculated per 1,000 marital status-specific births.





**FIGURE I5. INFANT MORTALITY RATES BY ONSET OF PRENATAL CARE  
NEW JERSEY, 1993-2003**



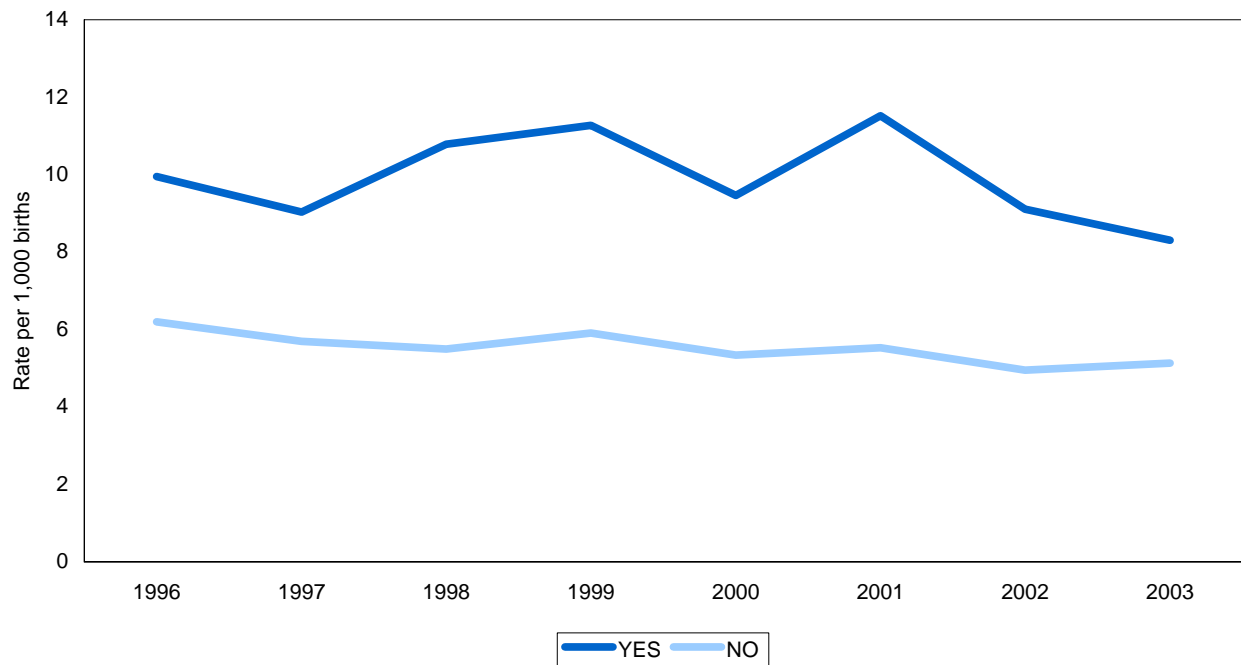
**TABLE I5. INFANT MORTALITY BY ONSET OF PRENATAL CARE  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		FIRST TRIMESTER		SECOND TRIMESTER		THIRD TRIMESTER		NO CARE	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	995	8.4	526	6.1	132	8.6	22	6.5	80	54.8
1994	919	7.8	509	5.9	114	8.0	20	6.2	57	38.8
1995	776	6.7	430	5.0	82	6.0	16	**	56	42.9
1996	792	6.9	480	5.6	94	6.4	20	5.9	58	40.0
1997	727	6.4	422	5.0	91	6.1	15	**	53	38.5
1998	728	6.4	409	4.8	97	6.6	16	**	52	46.6
1999	770	6.8	418	4.9	99	6.6	19	**	58	50.8
2000	723	6.3	390	4.5	99	6.3	27	6.9	53	38.5
2001	745	6.4	414	4.8	110	6.7	24	5.8	67	36.1
2002	651	5.7	385	4.4	110	6.6	26	6.3	40	31.0
2003	662	5.7	421	4.7	94	5.5	26	5.5	40	30.9
Percent Change 1993-2003										
	-33.5	-32.8	-20.0	-22.1	-28.8	-36.5	18.2	-15.1	-50.0	-43.5

Rates are calculated per 1,000 prenatal care onset-specific births.

\*\* The number of deaths is too small to calculate a reliable rate.

**FIGURE I6. INFANT MORTALITY RATES BY TOBACCO USE DURING PREGNANCY  
NEW JERSEY, 1996-2003**

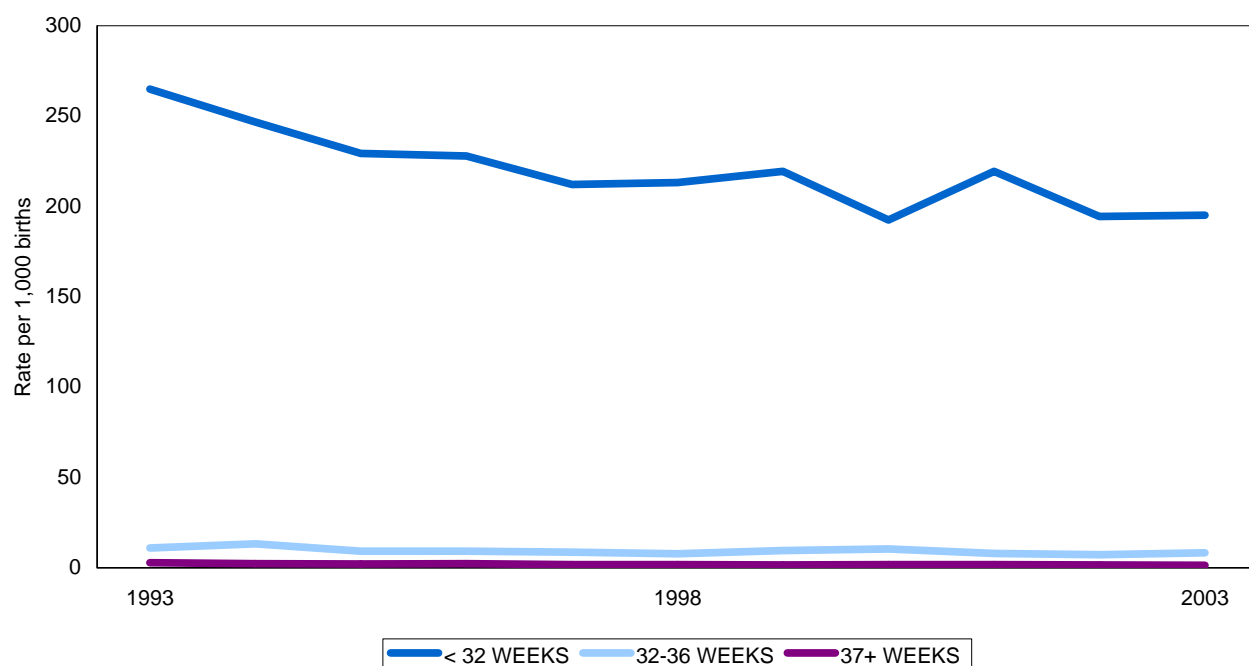


**TABLE I6. INFANT MORTALITY BY TOBACCO USE DURING PREGNANCY  
NEW JERSEY, 1996-2003**

YEAR	TOTAL		YES		NO	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1996	792	6.9	133	10.0	588	6.2
1997	727	6.4	120	9.0	534	5.7
1998	728	6.4	135	10.8	527	5.5
1999	770	6.8	129	11.3	571	5.9
2000	723	6.3	104	9.5	526	5.3
2001	745	6.4	119	11.5	550	5.5
2002	651	5.7	87	9.1	494	5.0
2003	662	5.7	74	8.3	525	5.1
Percent Change 1996-2003	-16.4	-18.2	-44.4	-16.5	-10.7	-17.2

Rates are calculated per 1,000 smoking status-specific births.

**FIGURE 17. INFANT MORTALITY RATES BY GESTATIONAL AGE  
NEW JERSEY, 1993-2003**



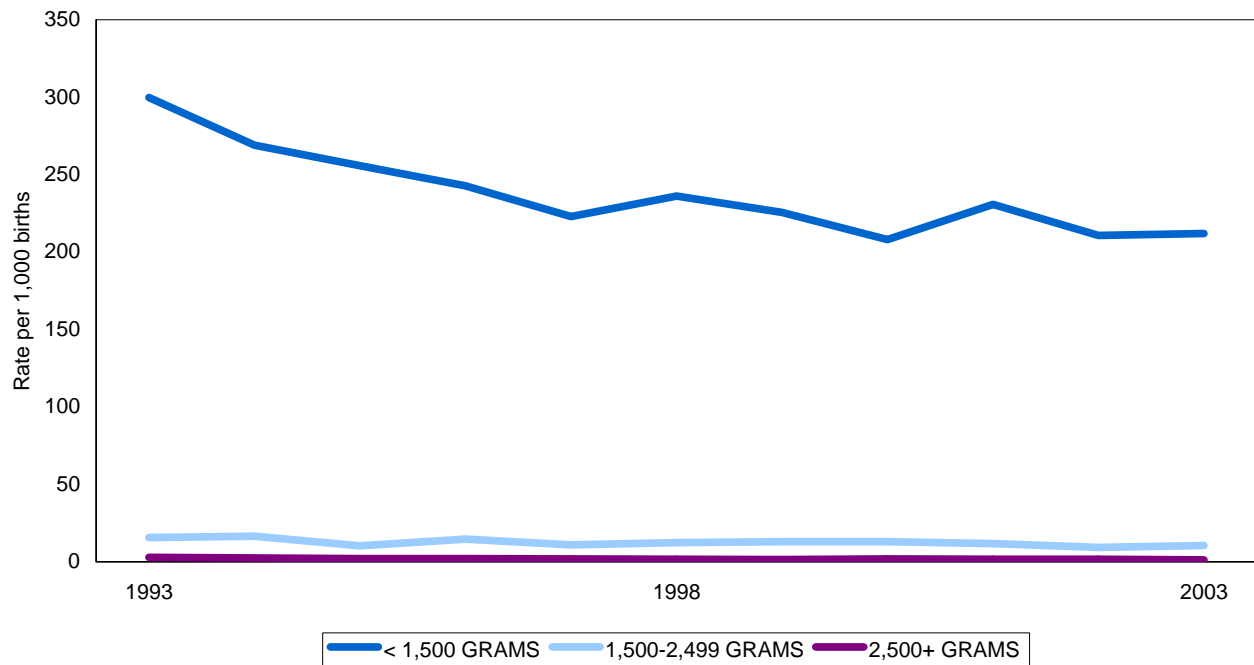
**TABLE 17. INFANT MORTALITY BY GESTATIONAL AGE  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		< 32 WEEKS		32-36 WEEKS		37+ WEEKS	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	995	8.4	516	264.9	83	11.0	294	2.9
1994	919	7.8	499	246.7	102	13.3	240	2.4
1995	776	6.7	440	229.4	70	9.2	205	2.1
1996	792	6.9	437	227.8	76	9.1	232	2.4
1997	727	6.4	411	212.2	74	8.7	176	1.8
1998	728	6.4	425	213.2	69	7.9	172	1.8
1999	770	6.8	457	219.4	87	9.6	163	1.7
2000	723	6.3	371	192.4	93	10.4	174	1.8
2001	745	6.4	426	219.4	71	7.9	177	1.8
2002	651	5.7	363	194.5	67	7.3	150	1.5
2003	662	5.7	388	195.2	78	8.4	136	1.4
Percent Change 1993-2003	-33.5	-32.8	-24.8	-26.3	-6.0	-23.5	-53.7	-52.8

Preterm births are those delivered prior to 37 weeks of gestation.

Rates are calculated per 1,000 gestational age-specific births.

**FIGURE I8. INFANT MORTALITY RATES BY BIRTH WEIGHT  
NEW JERSEY, 1993-2003**



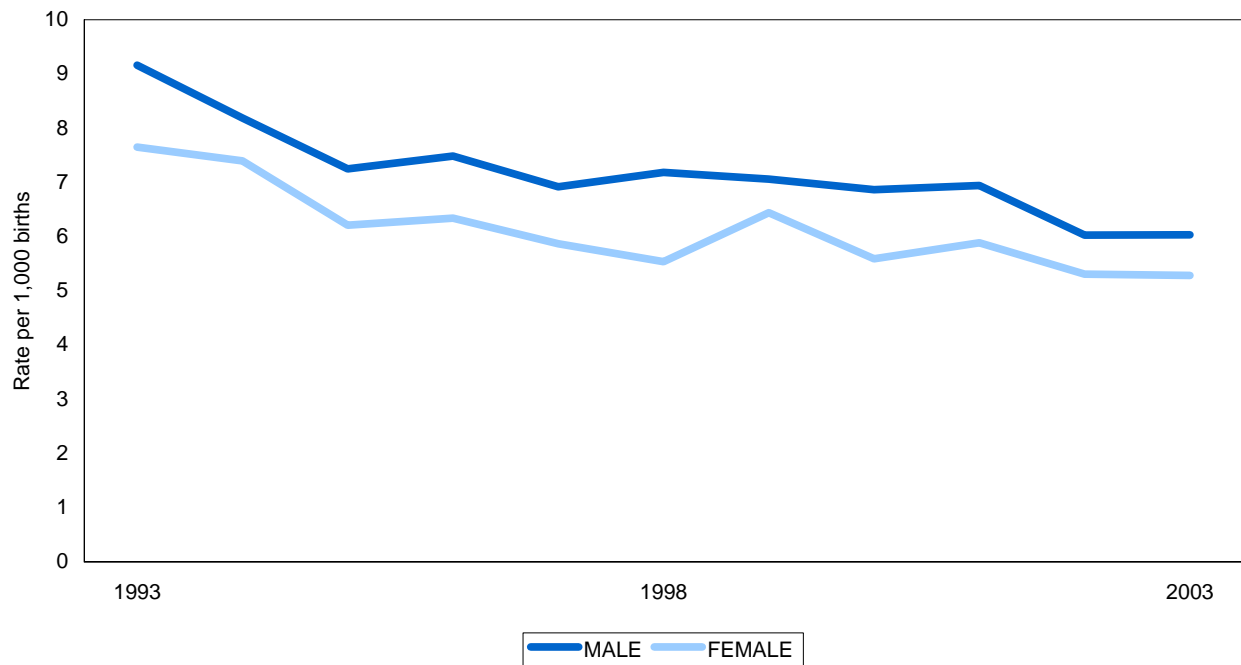
**TABLE I8. INFANT MORTALITY BY BIRTH WEIGHT  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		< 1,500 GRAMS		1,500-2,499 GRAMS		2,500+ GRAMS	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	995	8.4	519	299.8	111	15.6	299	2.8
1994	919	7.8	490	268.9	115	16.6	254	2.4
1995	776	6.7	435	255.9	70	10.3	219	2.1
1996	792	6.9	425	242.7	100	14.7	220	2.1
1997	727	6.4	405	223.0	75	10.9	196	1.9
1998	728	6.4	424	236.2	87	12.3	168	1.6
1999	770	6.8	444	225.6	93	13.1	150	1.5
2000	723	6.3	365	208.0	90	13.0	188	1.8
2001	745	6.4	427	230.7	83	11.7	175	1.7
2002	651	5.7	366	210.8	67	9.3	165	1.6
2003	662	5.7	397	212.1	78	10.6	132	1.3
Percent Change 1993-2003	-33.5	-32.8	-23.5	-29.3	-29.7	-32.4	-55.9	-54.9

Low birth weight is < 2,500 grams.

Rates are calculated per 1,000 birth weight-specific births.

**FIGURE I9. INFANT MORTALITY RATES BY SEX  
NEW JERSEY, 1993-2003**



**TABLE I9. INFANT MORTALITY BY SEX  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		MALE		FEMALE	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	995	8.4	551	9.2	442	7.6
1994	919	7.8	493	8.2	426	7.4
1995	776	6.7	428	7.2	348	6.2
1996	792	6.9	437	7.5	355	6.3
1997	727	6.4	401	6.9	325	5.9
1998	728	6.4	421	7.2	306	5.5
1999	770	6.8	411	7.1	358	6.4
2000	723	6.3	406	6.9	315	5.6
2001	745	6.4	412	6.9	332	5.9
2002	651	5.7	355	6.0	296	5.3
2003	662	5.7	360	6.0	302	5.3
Percent Change 1993-2003	-33.5	-32.8	-34.7	-34.1	-31.7	-30.9

Rates are calculated per 1,000 sex-specific births.

**TABLE 110. INFANT MORTALITY BY SELECTED CHARACTERISTICS AND RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 2003**

CHARACTERISTICS	TOTAL		WHITE		BLACK		HISPANIC		ASIAN/ PACIFIC ISLANDER	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
<b>AGE AT DEATH</b>										
Neonatal	476	4.1	153	2.6	133	7.7	101	3.9	38	3.8
Postneonatal	186	1.6	54	0.9	73	4.2	34	1.3	10	**
<b>AGE OF MOTHER</b>										
Under 20	66	9.2	14	**	26	11.0	23	7.4	0	**
20-24	128	6.6	30	4.7	46	10.5	40	5.5	8	**
25-29	144	5.1	49	3.7	50	12.3	31	4.4	11	**
30-34	180	4.9	71	3.2	53	14.3	25	4.7	16	**
35-39	74	3.6	33	2.5	17	**	13	**	9	**
40-44	29	6.6	9	**	13	**	2	**	4	**
<b>MARITAL STATUS</b>										
Married	312	3.9	155	3.0	57	9.4	53	4.4	41	4.3
Unmarried	299	8.8	51	6.4	148	13.2	82	5.9	7	**
<b>PLURALITY</b>										
Singleton	491	4.4	143	2.5	181	10.9	108	4.2	36	3.7
Multiple	133	25.9	64	19.7	25	37.7	27	41.1	12	**
<b>TRIMESTER PRENATAL CARE BEGAN</b>										
First	421	4.7	177	3.4	120	11.2	77	4.4	33	3.9
Second	94	5.5	17	**	34	7.9	34	5.3	7	**
Third	26	5.5	4	**	13	**	7	**	2	**
No Care	40	30.9	4	**	24	38.0	9	**	2	**
<b>MATERNAL SMOKING DURING PREGNANCY</b>										
Yes	74	8.3	22	3.9	39	20.1	11	**	0	**
No	525	5.1	177	3.4	162	10.7	123	5.0	48	4.9
<b>CLINICAL ESTIMATE OF GESTATION</b>										
<32 weeks	388	195.2	119	152.2	134	215.8	88	194.3	34	326.9
32-36 weeks	78	8.4	26	5.5	25	13.1	18	**	6	**
37+ weeks	136	1.4	54	1.0	45	3.1	28	1.2	8	**
<b>BIRTH WEIGHT (IN GRAMS)</b>										
<1,500	397	212.1	124	157.8	136	235.3	87	228.3	37	355.8
1,500-2,499	78	10.6	34	10.0	17	**	20	13.3	4	**
2,500+	132	1.3	47	0.8	50	3.3	28	1.2	6	**

Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

Rates are computed per 1,000 characteristic-specific and race/ethnicity-specific births.

\*\* The number of deaths is too small to calculate a reliable rate.

**TABLE I11. INFANT MORTALITY BY MEDICAL RISK FACTORS AND RACE/ETHNICITY OF MOTHER**

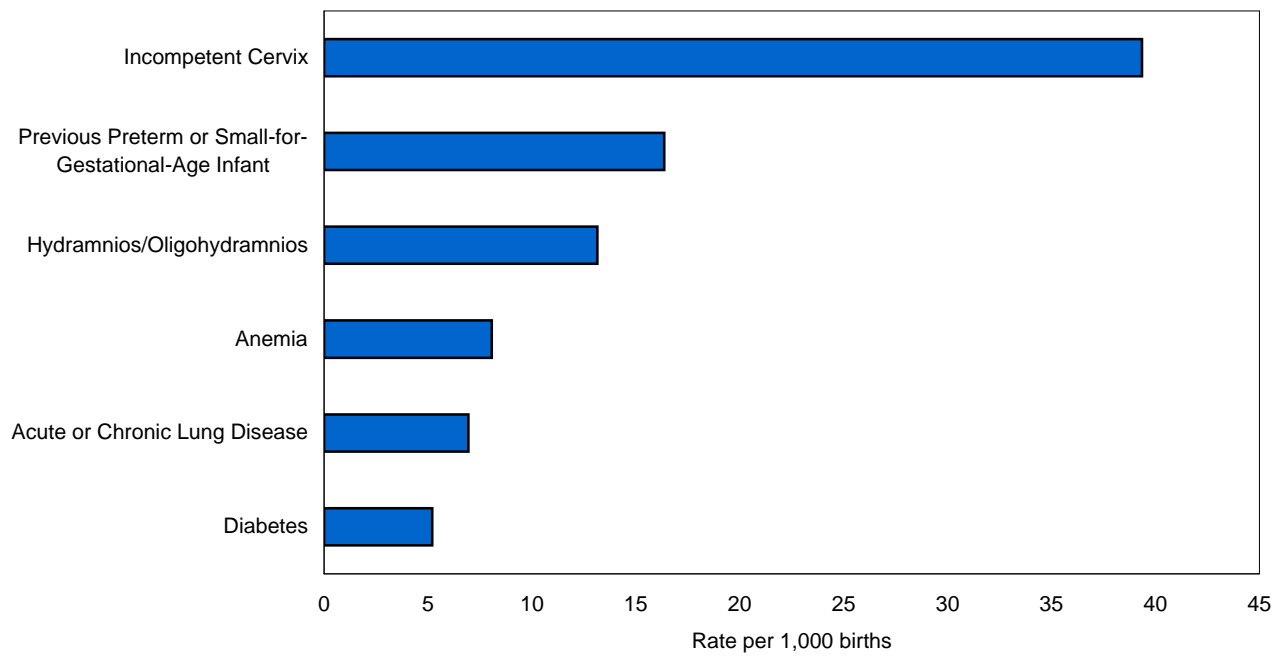
**NEW JERSEY, 2003**

MEDICAL RISK FACTOR	TOTAL		WHITE	BLACK	HISPANIC	ASIAN/ PACIFIC ISLANDER
	NUMBER	RATE				
None	235	3.5	78	72	61	19
Anemia (Hct.<30/Hgb.<10)	20	8.1	3	13	3	0
Cardiac Disease	9	5.6	6	1	1	1
Acute or Chronic Lung Disease	28	6.9	8	11	7	1
Diabetes	29	5.2	7	12	4	5
Sexually Transmitted Diseases	16	4.6	4	6	5	1
Genital Herpes	4	3.9	3	0	1	0
Other Sexually Transmitted Diseases	12	4.9	1	6	4	1
Hydramnios/Oligohydramnios	25	13.2	8	9	7	1
Hemoglobinopathy	0	0.0	0	0	0	0
Hypertension, Chronic	11	10.9	3	8	0	0
Hypertension, Pregnancy-Associated	19	5.6	6	6	5	1
Eclampsia	3	50.0	2	0	1	0
Incompetent Cervix	24	39.3	11	5	4	3
Previous Infant 4000+ Grams	2	1.7	1	1	0	0
Previous Preterm or Small-for-Gestational-Age Infant	23	16.4	6	8	6	3
Renal Disease	7	9.7	2	4	1	0
Rh Sensitization	4	8.5	3	0	1	0
Uterine Bleeding	17	24.6	8	5	0	4
Other Risk Factor	243	8.8	84	89	47	16

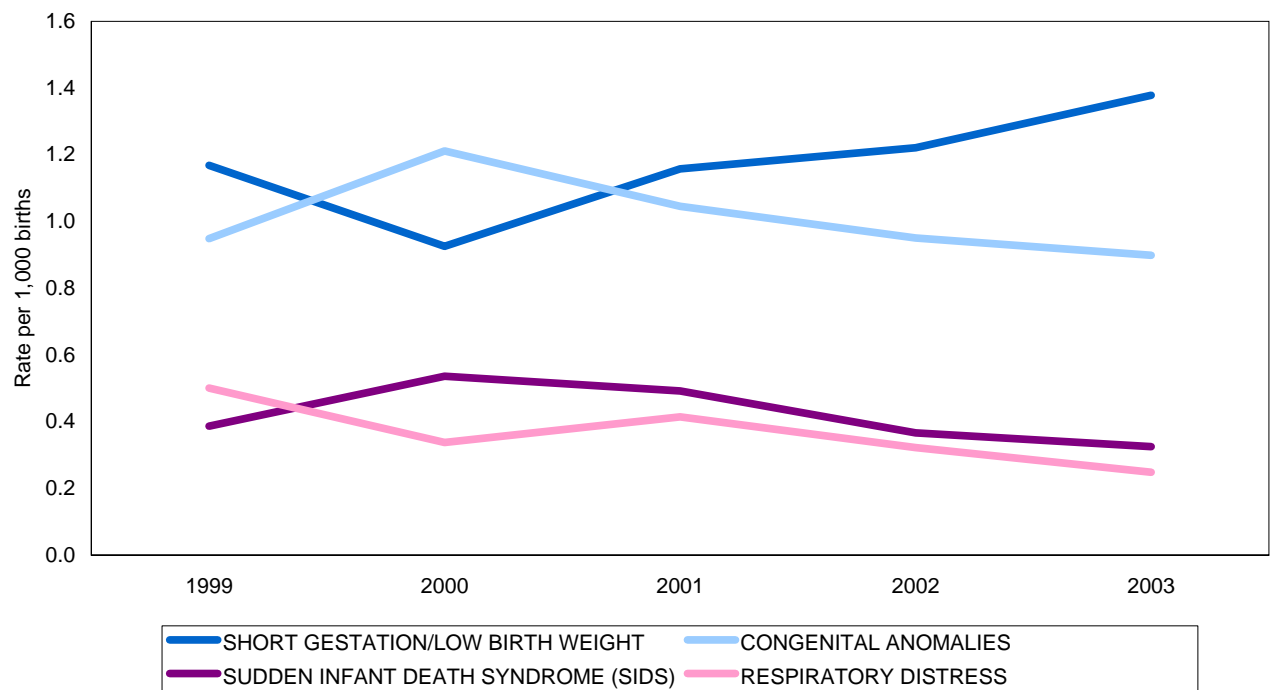
Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

Rates are computed per 1,000 medical risk factor-specific births. Rates based on fewer than 20 deaths should be interpreted with caution.

**FIGURE I10. INFANT MORTALITY RATES FOR SELECTED MEDICAL RISK FACTORS  
NEW JERSEY, 2003**



**FIGURE I11. INFANT MORTALITY RATES FOR LEADING CAUSES OF DEATH  
NEW JERSEY, 1999-2003**





**TABLE 112. LEADING CAUSES OF INFANT MORTALITY**

**NEW JERSEY, 1999-2003**

CAUSE OF DEATH	1999				2000				2001				2002				2003			
	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE
SHORT GESTATION/LOW BIRTH WEIGHT	1	136	18.4	1.2	2	107	14.8	0.9	1	134	18.0	1.2	1	140	21.5	1.2	1	161	24.3	1.4
CONGENITAL ANOMALIES	2	118	15.9	1.0	1	140	19.4	1.2	2	121	16.2	1.0	2	109	16.7	1.0	2	105	15.9	0.9
SUDDEN INFANT DEATH SYNDROME (SIDS)	4	44	5.9	0.4	3	62	8.6	0.5	3	57	7.7	0.5	3	42	6.5	0.4	3	38	5.7	0.3
RESPIRATORY DISTRESS	3	57	7.7	0.5	4	39	5.4	0.3	4	48	6.4	0.4	4	37	5.7	0.3	4	29	4.4	0.2
MATERNAL COMPLICATIONS OF PREGNANCY	5	37	5.0	0.3		28	3.9	0.2	5	36	4.8	0.3	5	28	4.3	0.2	5	28	4.2	0.2
BACTERIAL SEPSIS		27	3.6	0.2		21	2.9	0.2		18	2.4	**		19	2.9	**	5	28	4.2	0.2
PLACENTA, CORD, AND MEMBRANE COMPLICATIONS		29	3.9	0.3	5	32	4.4	0.3		17	2.3	**	5	28	4.3	0.2		19	2.9	**

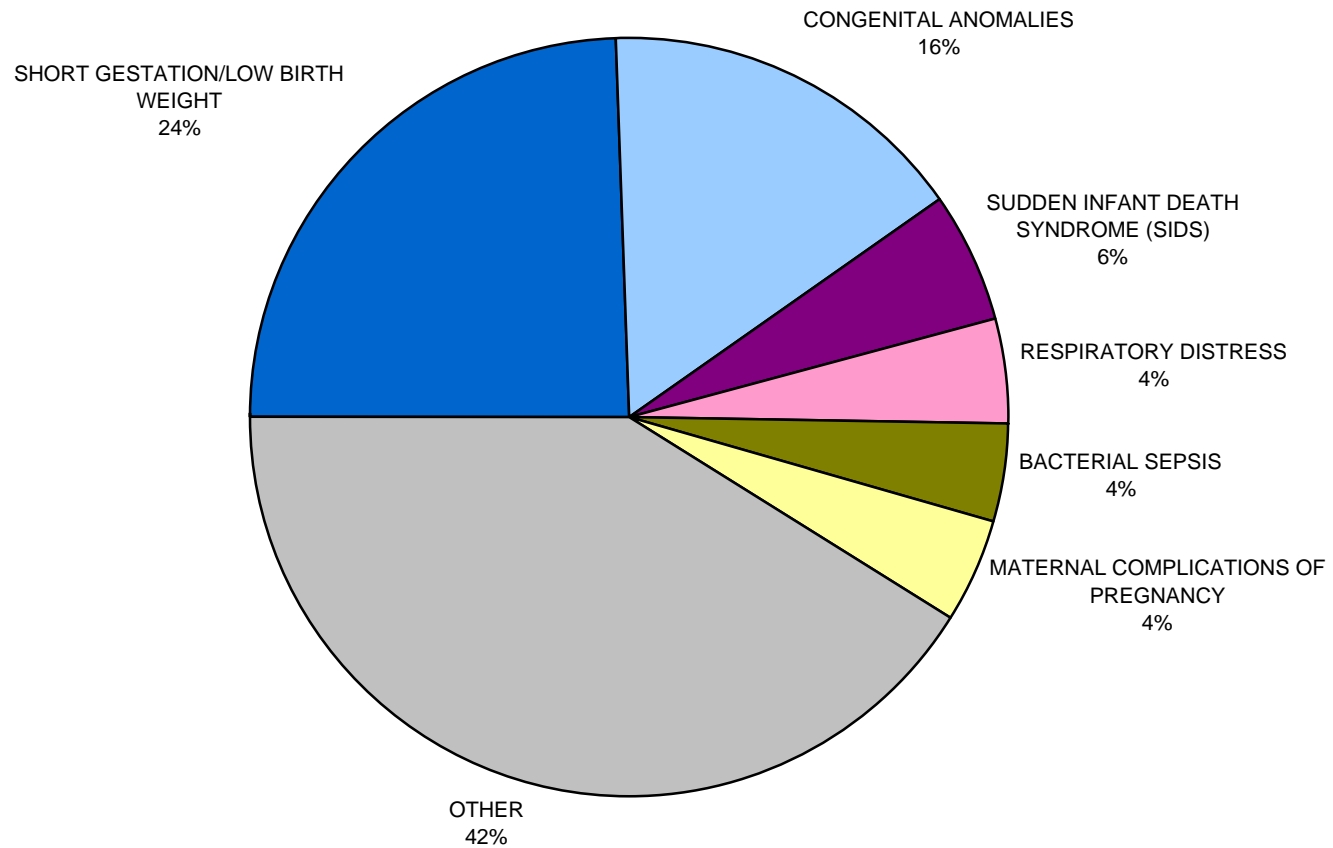
See Technical Notes for ICD-10 codes corresponding to cause groups.

Percents are computed per 100 infant deaths.

Rates are computed per 1,000 births.

\*\* The number of deaths is too small to calculate a reliable rate.

**FIGURE I12. LEADING CAUSES OF INFANT MORTALITY  
NEW JERSEY, 2003**



**TABLE I13. LEADING CAUSES OF INFANT MORTALITY BY INFANT AGE**  
**NEW JERSEY, 2003**

CAUSE OF DEATH	INFANT DEATHS		NEONATAL DEATHS		POSTNEONATAL DEATHS	
	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER
SHORT GESTATION/LOW BIRTH WEIGHT	1	161	1	159		2
CONGENITAL ANOMALIES	2	105	2	78	2	27
SUDDEN INFANT DEATH SYNDROME (SIDS)	3	38		6	1	32
RESPIRATORY DISTRESS	4	29	4	27		2
BACTERIAL SEPSIS	5	28	4	27		1
MATERNAL COMPLICATIONS OF PREGNANCY	5	28	3	28		0
SEPTICEMIA		12		0	3	12
CIRCULATORY SYSTEM DISEASES		12		0	3	12
CHRONIC RESPIRATORY DISEASE		8		0	5	8

See Technical Notes for ICD-10 codes corresponding to cause groups.

**TABLE I14. LEADING CAUSES OF INFANT MORTALITY BY RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 2003**

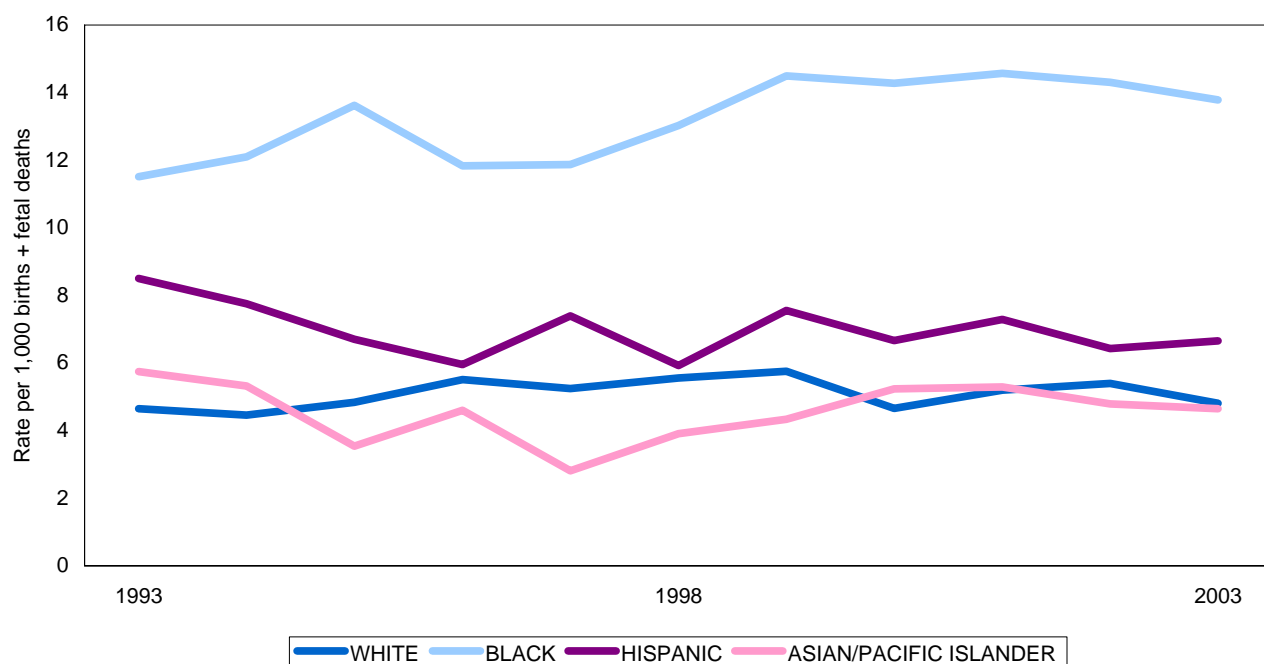
CAUSE OF DEATH	WHITE		BLACK		HISPANIC		ASIAN/ PACIFIC ISLANDER	
	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER
SHORT GESTATION/LOW BIRTH WEIGHT	1	46	1	53	1	31	1	17
CONGENITAL ANOMALIES	2	38	2	29	2	21	2	6
SUDDEN INFANT DEATH SYNDROME (SIDS)	3	10	3	21	3	5		1
RESPIRATORY DISTRESS	TIE	8	5	10	3	5	3	3
BACTERIAL SEPSIS		9	4	13	TIE	4	TIE	1
MATERNAL COMPLICATIONS OF PREGNANCY	3	10		7		4	3	3
KIDNEY DISORDERS		3		4	3	5		0
CIRCULATORY SYSTEM DISEASES		2		5		1	5	2
NECROTIZING ENTERCOLITIS		4		2		2	5	2

Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

See Technical Notes for ICD-10 codes corresponding to cause groups.

# FETAL MORTALITY DATA

**FIGURE F1. FETAL MORTALITY RATES BY RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 1993-2003**



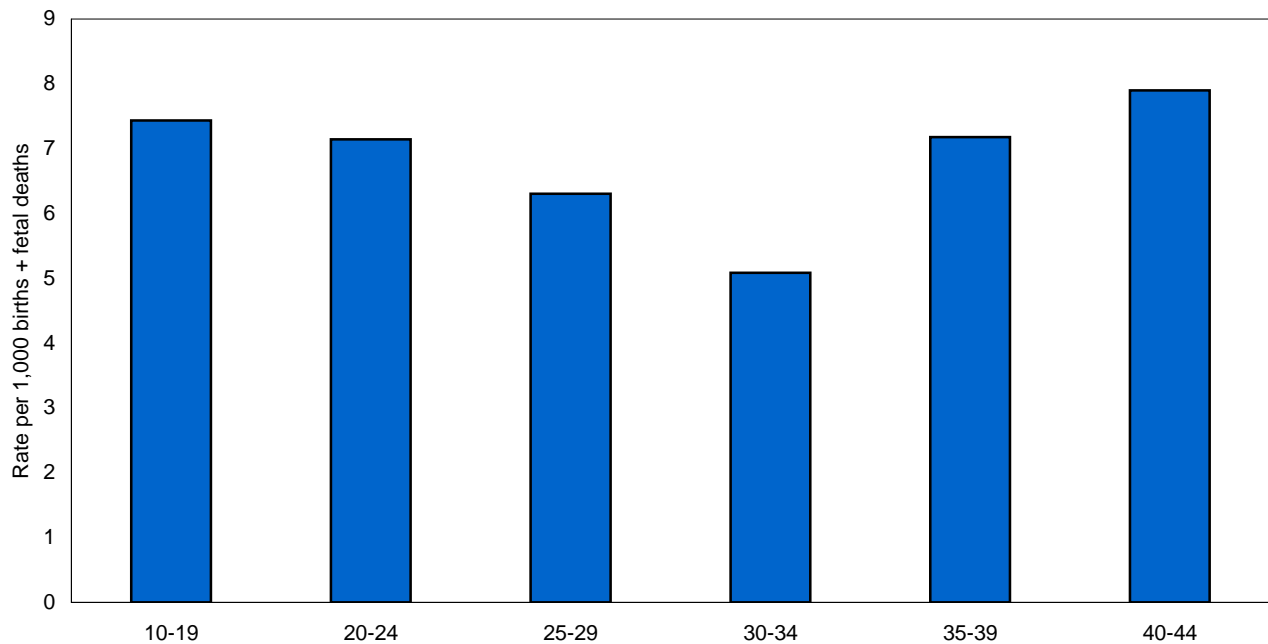
**TABLE F1. FETAL MORTALITY BY RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		WHITE		BLACK		HISPANIC		ASIAN/ PACIFIC ISLANDER	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	766	6.5	331	4.6	251	11.5	150	8.5	28	5.7
1994	750	6.3	314	4.5	262	12.1	139	7.8	27	5.3
1995	755	6.5	331	4.8	269	13.6	125	6.7	20	3.5
1996	753	6.5	365	5.5	228	11.8	115	6.0	31	4.6
1997	742	6.5	340	5.2	228	11.9	144	7.4	20	2.8
1998	760	6.6	356	5.6	250	13.0	120	5.9	29	3.9
1999	839	7.3	361	5.8	274	14.5	160	7.6	34	4.3
2000	767	6.6	291	4.7	271	14.3	148	6.7	47	5.2
2001	818	7.0	320	5.2	271	14.6	170	7.3	50	5.3
2002	786	6.8	323	5.4	256	14.3	157	6.4	46	4.8
2003	756	6.4	288	4.8	241	13.8	175	6.7	47	4.6
Percent Change 1993- 2003	-1.3	-0.4	-13.0	3.5	-4.0	19.8	16.7	-21.7	67.9	-19.1

Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

Rates are calculated per 1,000 race/ethnicity-specific births plus fetal deaths of 20 or more weeks gestation.

**FIGURE F2. FETAL MORTALITY RATES BY AGE OF MOTHER  
NEW JERSEY, 2003**



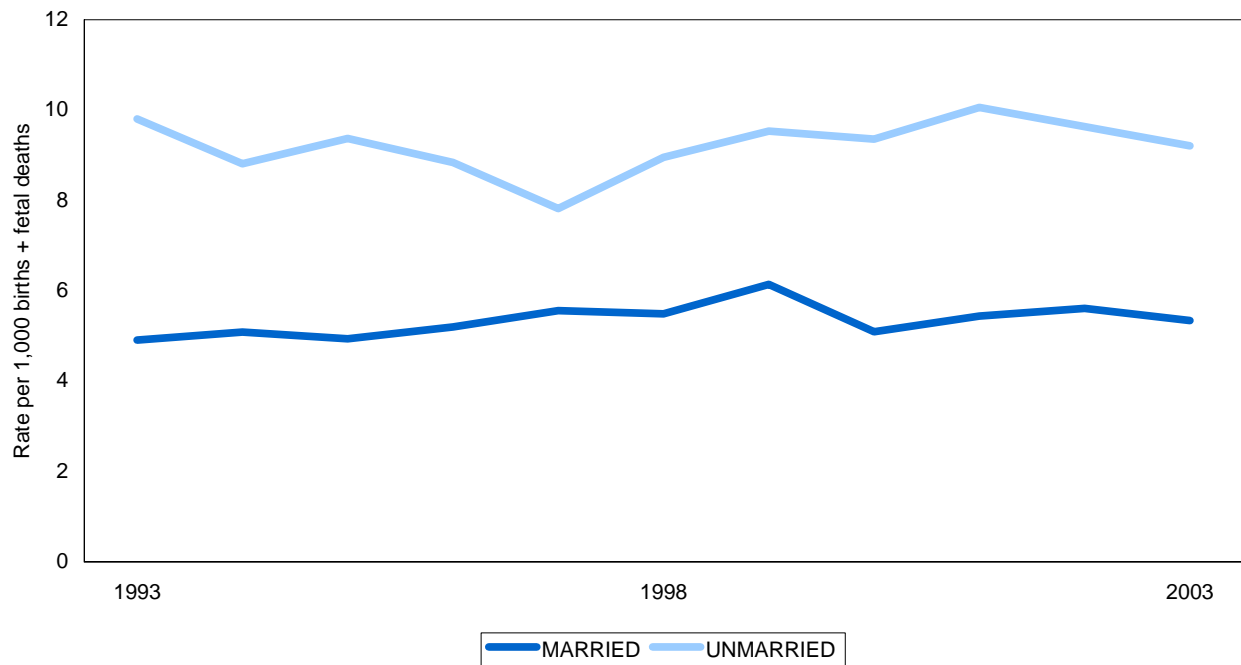
**TABLE F2. FETAL MORTALITY BY AGE OF MOTHER  
NEW JERSEY, 1993-2003**

YEAR	10-19		20-24		25-29		30-34		35-39		40-44	
	NO.	RATE	NO.	RATE	NO.	RATE	NO.	RATE	NO.	RATE	NO.	RATE
1993	80	8.5	139	6.6	191	5.5	185	5.2	107	7.1	22	9.2
1994	76	7.8	120	6.0	171	5.1	207	5.6	112	7.0	23	8.9
1995	83	8.8	131	7.0	170	5.3	202	5.6	106	6.4	38	13.8
1996	76	8.6	116	6.5	168	5.4	197	5.3	122	7.0	28	9.5
1997	60	6.8	97	5.5	176	5.8	209	5.8	126	7.2	35	10.7
1998	64	7.2	104	5.7	184	6.2	185	5.2	142	7.6	39	11.1
1999	75	8.9	127	6.8	203	7.0	220	6.2	149	7.8	30	8.1
2000	71	8.6	136	7.1	163	5.7	181	5.0	141	7.1	34	8.6
2001	69	8.8	151	7.7	189	6.7	211	5.8	138	6.9	31	7.6
2002	66	8.8	151	7.8	162	5.8	186	5.2	163	8.1	40	9.6
2003	54	7.4	139	7.1	180	6.3	188	5.1	148	7.2	35	7.9
Percent Change 1993-2003	-32.5	-12.4	0.0	7.5	-5.8	14.8	1.6	-1.6	38.3	1.8	59.1	-14.4

Rates are calculated per 1,000 maternal age-specific births plus fetal deaths of 20 or more weeks gestation.

\*\* The number of deaths is too small to calculate a reliable rate.

**FIGURE F3. FETAL MORTALITY RATES BY MARITAL STATUS OF MOTHER  
NEW JERSEY, 1993-2003**



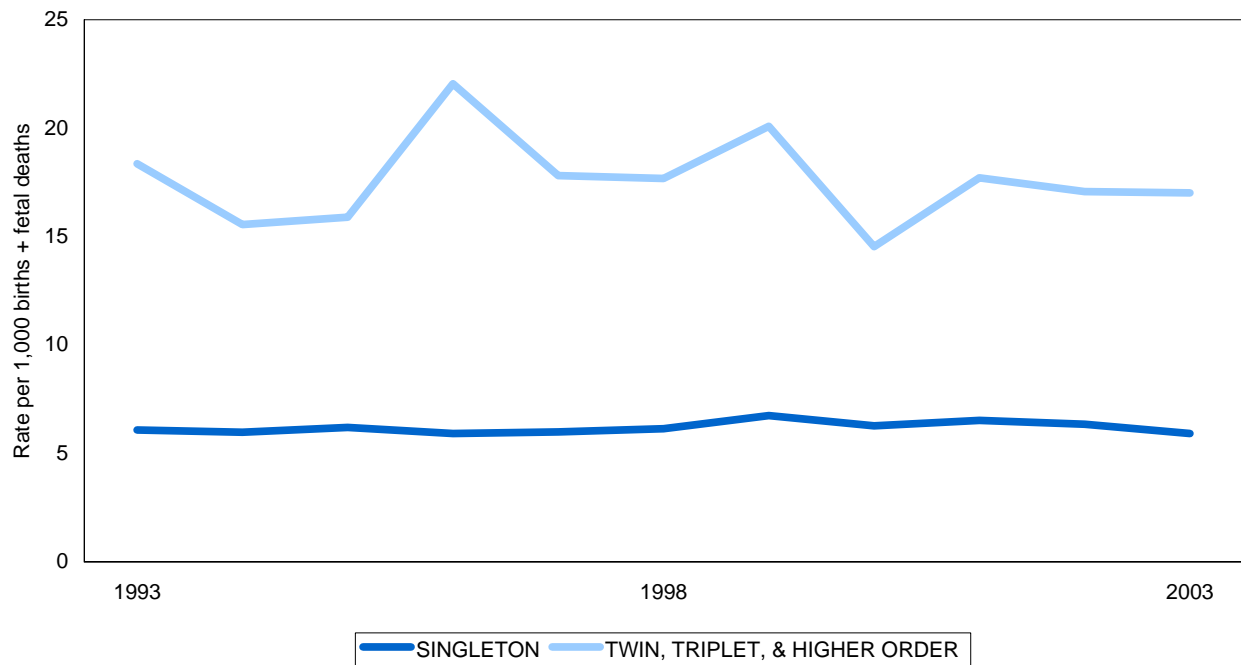
**TABLE F3. FETAL MORTALITY BY MARITAL STATUS OF MOTHER  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		MARRIED		UNMARRIED	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	766	6.5	425	4.9	314	9.8
1994	750	6.3	435	5.1	288	8.8
1995	755	6.5	416	4.9	295	9.4
1996	753	6.5	421	5.2	279	8.8
1997	742	6.5	444	5.6	247	7.8
1998	760	6.6	438	5.5	288	9.0
1999	839	7.3	489	6.1	307	9.5
2000	767	6.6	408	5.1	311	9.4
2001	818	7.0	435	5.4	339	10.1
2002	786	6.8	442	5.6	324	9.6
2003	756	6.4	428	5.3	315	9.2
Percent Change 1993-2003	-1.3	-0.4	0.7	8.7	0.3	-6.0

Rates are calculated per 1,000 marital status-specific births plus fetal deaths of 20 or more weeks gestation.



**FIGURE F4. FETAL MORTALITY RATES BY PLURALITY  
NEW JERSEY, 1993-2003**

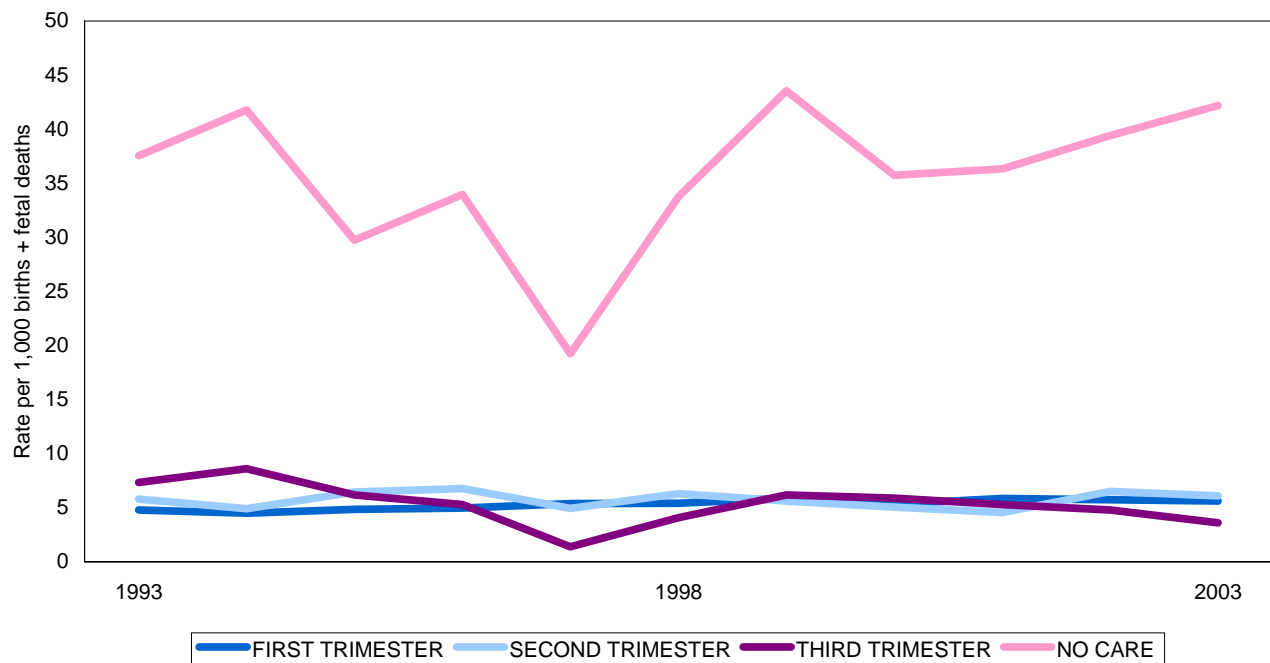


**TABLE F4. FETAL MORTALITY BY PLURALITY  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		SINGLETON		TWIN, TRIPLET, & HIGHER ORDER	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	766	6.5	699	6.1	64	18.4
1994	750	6.3	686	6.0	56	15.6
1995	755	6.5	696	6.2	56	15.9
1996	753	6.5	657	5.9	91	22.0
1997	742	6.5	657	6.0	77	17.8
1998	760	6.6	675	6.1	83	17.7
1999	839	7.3	741	6.7	97	20.1
2000	767	6.6	700	6.3	67	14.5
2001	818	7.0	730	6.5	84	17.7
2002	786	6.8	700	6.3	86	17.1
2003	756	6.4	665	5.9	89	17.0
Percent Change 1993-2003	-1.3	-0.4	-4.9	-2.6	39.1	-7.3

Rates are calculated per 1,000 plurality-specific births plus fetal deaths of 20 or more weeks gestation.

**FIGURE F5. FETAL MORTALITY RATES BY ONSET OF PRENATAL CARE  
NEW JERSEY, 1993-2003**



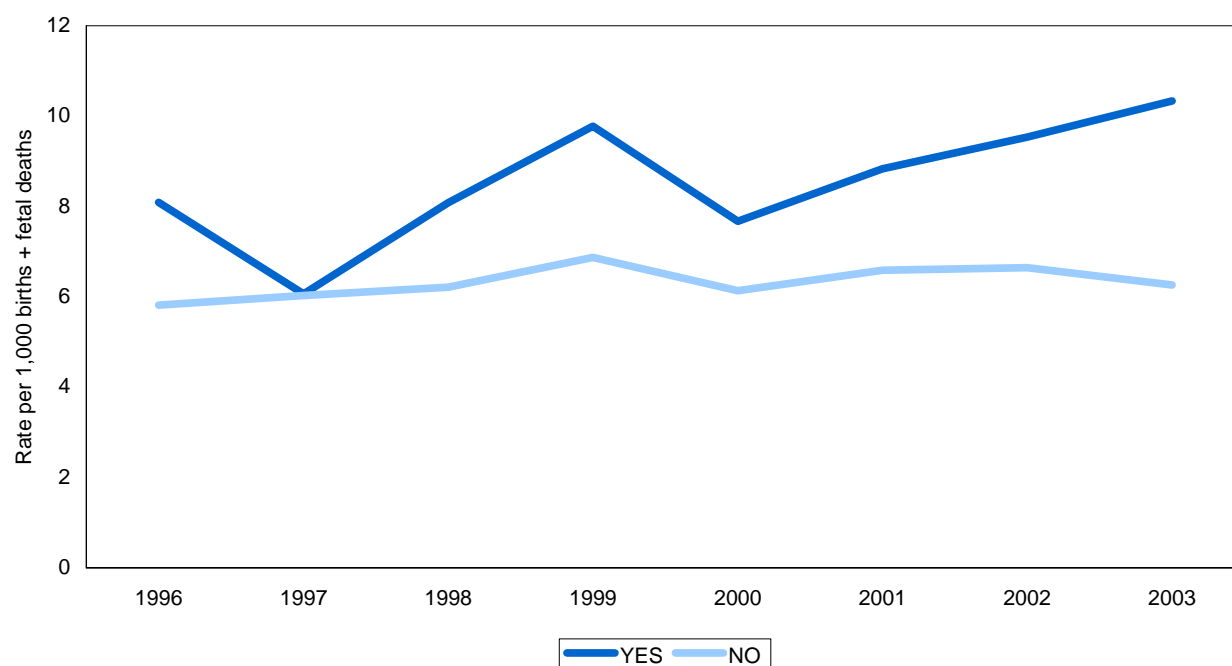
**TABLE F5. FETAL MORTALITY BY ONSET OF PRENATAL CARE  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		FIRST TRIMESTER		SECOND TRIMESTER		THIRD TRIMESTER		NO CARE	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	766	6.5	418	4.8	89	5.8	25	7.3	57	37.5
1994	750	6.3	389	4.5	70	4.9	28	8.6	64	41.8
1995	755	6.5	419	4.9	89	6.4	19	**	40	29.7
1996	753	6.5	428	5.0	100	6.8	18	**	51	34.0
1997	742	6.5	459	5.4	74	4.9	5	**	27	19.2
1998	760	6.6	462	5.4	93	6.3	15	**	39	33.8
1999	839	7.3	506	5.9	84	5.6	24	6.2	52	43.6
2000	767	6.6	464	5.4	80	5.0	23	5.9	51	35.7
2001	818	7.0	509	5.9	75	4.6	22	5.3	70	36.3
2002	786	6.8	510	5.7	109	6.5	20	4.8	53	39.4
2003	756	6.4	504	5.6	105	6.1	17	**	57	42.2
Percent Change 1993-2003	-1.3	-0.4	20.6	17.3	18.0	5.2	-32.0	**	0.0	12.4

Rates are calculated per 1,000 prenatal care onset-specific births plus fetal deaths of 20 or more weeks gestation.

\*\* The number of deaths is too small to calculate a reliable rate.

**FIGURE F6. FETAL MORTALITY RATES BY TOBACCO USE DURING PREGNANCY  
NEW JERSEY, 1996-2003**

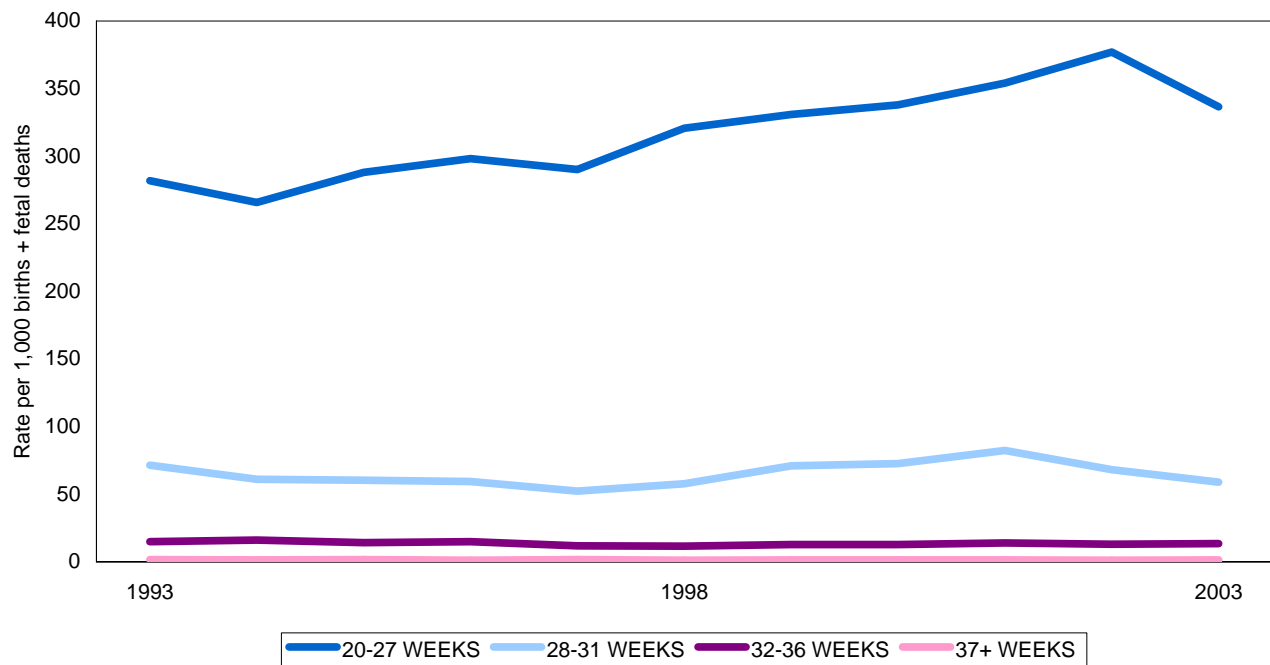


**TABLE F6. FETAL MORTALITY BY TOBACCO USE DURING PREGNANCY  
NEW JERSEY, 1996-2003**

YEAR	TOTAL		YES		NO	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1996	753	6.5	109	8.1	555	5.8
1997	742	6.5	81	6.1	569	6.0
1998	760	6.6	102	8.1	600	6.2
1999	839	7.3	113	9.8	669	6.9
2000	767	6.6	85	7.7	608	6.1
2001	818	7.0	92	8.8	660	6.6
2002	786	6.8	92	9.5	667	6.6
2003	756	6.4	93	10.3	645	6.3
Percent Change 1996-2003	0.4	-1.7	-14.7	27.7	16.2	7.7

Rates are calculated per 1,000 smoking status-specific births plus fetal deaths of 20 or more weeks gestation.

**FIGURE F7. FETAL MORTALITY RATES BY GESTATIONAL AGE  
NEW JERSEY, 1993-2003**



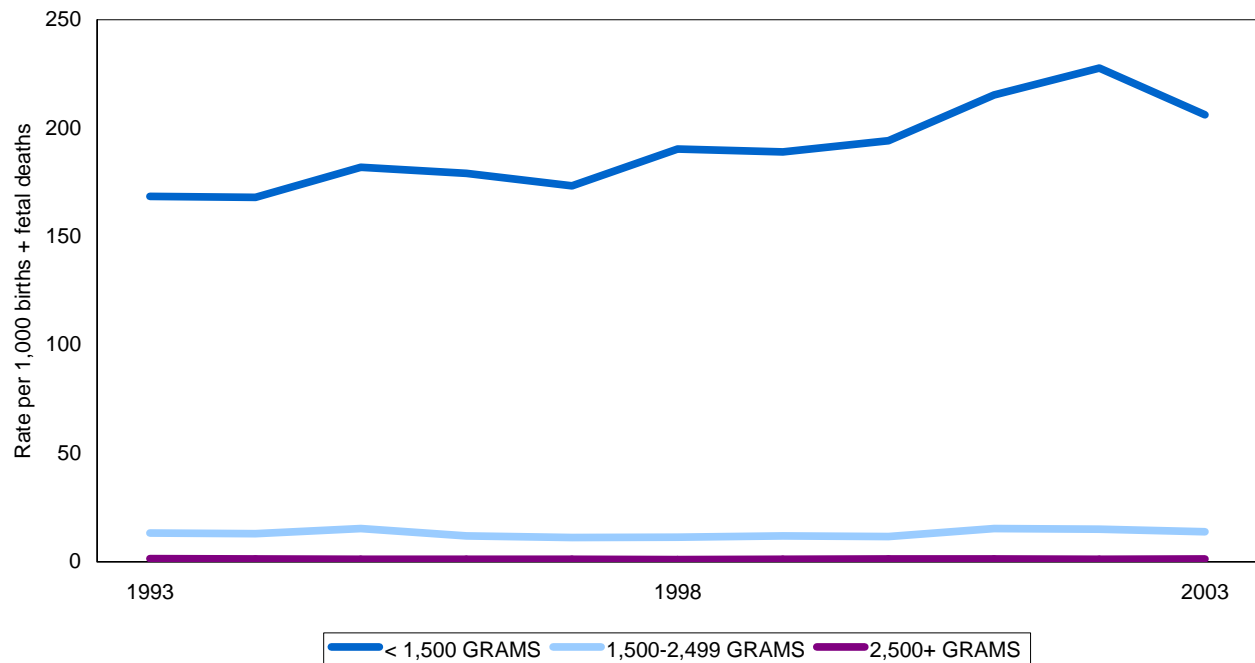
**TABLE F7. FETAL MORTALITY BY GESTATIONAL AGE  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		20-27 WEEKS		28-31 WEEKS		32-36 WEEKS		37+ WEEKS	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	766	6.5	326	282.0	84	71.4	115	15.0	167	1.6
1994	750	6.3	334	265.7	69	61.0	126	16.2	140	1.4
1995	755	6.5	344	288.1	67	60.5	110	14.2	155	1.6
1996	753	6.5	357	298.2	66	59.3	125	14.8	125	1.3
1997	742	6.5	351	290.1	58	52.3	102	11.9	152	1.6
1998	760	6.6	409	320.8	67	57.7	102	11.5	126	1.3
1999	839	7.3	457	330.9	86	71.0	116	12.7	141	1.4
2000	767	6.6	421	337.9	85	72.7	116	12.8	134	1.4
2001	818	7.0	448	354.2	98	82.3	128	14.0	135	1.4
2002	786	6.8	462	377.1	78	68.2	121	13.0	122	1.2
2003	756	6.4	424	336.5	70	58.9	127	13.5	131	1.3
Percent Change 1993-2003	-1.3	-0.4	30.1	19.3	-16.7	-17.5	10.4	-9.9	-21.6	-19.9

Preterm births are those delivered prior to 37 weeks of gestation.

Rates are calculated per 1,000 gestational age-specific births plus fetal deaths of 20 or more weeks gestation.

**FIGURE F8. FETAL MORTALITY RATES BY DELIVERY WEIGHT  
NEW JERSEY, 1993-2003**



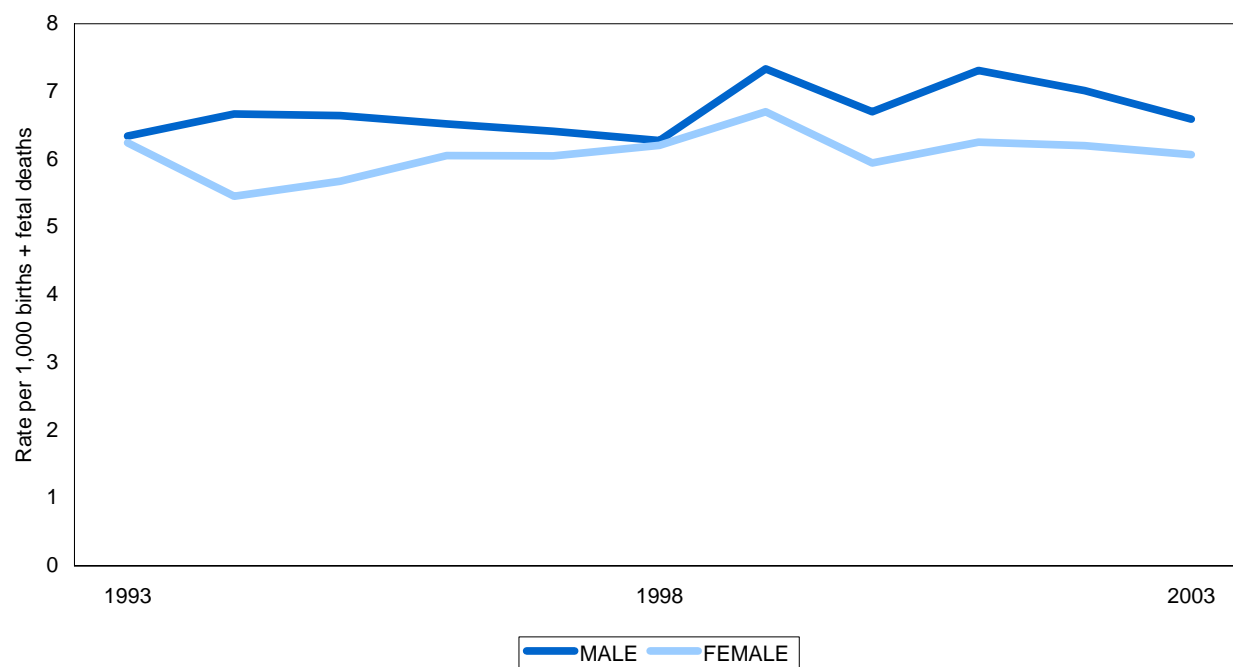
**TABLE F8. FETAL MORTALITY BY DELIVERY WEIGHT  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		< 1,500 GRAMS		1,500-2,499 GRAMS		2,500+ GRAMS	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	766	6.5	351	168.6	95	13.2	150	1.4
1994	750	6.3	368	168.0	91	13.0	134	1.3
1995	755	6.5	378	181.9	106	15.4	121	1.2
1996	753	6.5	382	179.1	82	11.9	129	1.3
1997	742	6.5	381	173.4	78	11.2	127	1.2
1998	760	6.6	422	190.3	81	11.3	104	1.0
1999	839	7.3	459	189.1	86	12.0	124	1.2
2000	767	6.6	423	194.2	82	11.7	132	1.3
2001	818	7.0	508	215.3	110	15.3	132	1.3
2002	786	6.8	512	227.8	110	15.1	128	1.2
2003	756	6.4	486	206.1	104	13.9	138	1.3
Percent Change 1993-2003	-1.3	-0.4	38.5	22.3	9.5	5.3	-8.0	-5.9

Low delivery weight is < 2,500 grams.

Rates are calculated per 1,000 delivery weight-specific births plus fetal deaths of 20 or more weeks gestation.

**FIGURE F9. FETAL MORTALITY RATES BY SEX  
NEW JERSEY, 1993-2003**



**TABLE F9. FETAL MORTALITY BY SEX  
NEW JERSEY, 1993-2003**

YEAR	TOTAL		MALE		FEMALE	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1993	766	6.5	384	6.3	363	6.2
1994	750	6.3	404	6.7	316	5.5
1995	755	6.5	395	6.6	320	5.7
1996	753	6.5	383	6.5	341	6.1
1997	742	6.5	374	6.4	337	6.1
1998	760	6.6	370	6.3	345	6.2
1999	839	7.3	430	7.3	375	6.7
2000	767	6.6	399	6.7	337	5.9
2001	818	7.0	437	7.3	355	6.3
2002	786	6.8	416	7.0	348	6.2
2003	756	6.4	396	6.6	349	6.1
Percent Change 1993-2003	-1.3	-0.4	3.1	3.9	-3.9	-2.8

Rates are calculated per 1,000 sex-specific births plus fetal deaths of 20 or more weeks gestation.

**TABLE F10. FETAL MORTALITY BY SELECTED CHARACTERISTICS AND RACE/ETHNICITY OF MOTHER  
NEW JERSEY, 2003**

CHARACTERISTICS	TOTAL		WHITE		BLACK		HISPANIC		ASIAN/ PACIFIC ISLANDER	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
<b>AGE OF MOTHER</b>										
Under 20	54	7.4	10	**	27	11.3	16	**	0	**
20-24	139	7.1	38	5.9	51	11.5	44	6.0	6	**
25-29	180	6.3	62	4.6	60	14.5	41	5.8	16	**
30-34	188	5.1	89	4.0	45	12.0	41	7.6	13	**
35-39	148	7.2	66	5.0	47	21.8	25	9.0	9	**
40-44	35	7.9	21	7.7	7	**	4	**	2	**
<b>MARITAL STATUS</b>										
Married	428	5.3	225	4.3	76	12.4	79	6.5	46	4.8
Unmarried	315	9.2	60	7.4	157	13.8	95	6.8	1	**
<b>PLURALITY</b>										
Singleton	665	5.9	243	4.3	215	12.8	161	6.3	43	4.4
Multiple	89	17.0	45	13.6	25	36.3	14	**	4	**
<b>TRIMESTER PRENATAL CARE BEGAN</b>										
First	504	5.6	226	4.3	131	12.0	113	6.3	31	3.7
Second	105	6.1	25	4.9	42	9.6	32	5.0	6	**
Third	17	**	3	**	5	**	6	**	3	**
No Care	57	42.2	9	**	37	55.3	9	**	2	**
<b>MATERNAL SMOKING DURING PREGNANCY</b>										
Yes	93	10.3	44	7.8	45	22.7	4	**	0	**
No	645	6.3	239	4.6	188	12.3	169	6.8	47	4.7
<b>CLINICAL ESTIMATE OF GESTATION</b>										
20-27 weeks	424	327.7	151	350.3	160	339.7	86	292.5	22	285.7
28-31 weeks	70	58.9	24	45.6	21	63.4	19	**	6	**
32-36 weeks	127	13.5	49	10.3	36	18.6	31	15.4	11	**
37+ weeks	131	1.3	62	1.2	22	1.5	39	1.6	8	**
<b>DELIVERY WEIGHT (IN GRAMS)</b>										
<1,500	486	206.1	166	174.4	184	241.5	107	219.3	26	200.0
1,500-2,499	104	13.9	45	13.0	24	13.8	23	15.0	11	**
2,500+	138	1.3	61	1.1	25	1.7	44	1.8	8	**

Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

Rates are computed per 1,000 characteristic-specific and race/ethnicity-specific births plus fetal deaths.

\*\* The number of deaths is too small to calculate a reliable rate.

**TABLE F11. FETAL MORTALITY BY MEDICAL RISK FACTORS AND RACE/ETHNICITY OF MOTHER**  
**NEW JERSEY, 2003**

MEDICAL RISK FACTOR	TOTAL		WHITE	BLACK	HISPANIC	ASIAN/ PACIFIC ISLANDER
	NUMBER	RATE				
None	378	5.6	162	84	99	31
Anemia (Hct.<30/Hgb.<10)	14	5.6	4	4	4	2
Cardiac Disease	5	3.1	0	2	2	0
Acute or Chronic Lung Disease	18	4.4	3	7	8	0
Diabetes	27	4.8	9	12	4	2
Sexually Transmitted Diseases	27	7.8	8	17	1	1
Genital Herpes	5	4.9	2	3	0	0
Other Sexually Transmitted Diseases	22	9.0	6	14	1	1
Hydramnios/Oligohydramnios	18	9.4	8	6	4	0
Hemoglobinopathy	3	11.0	1	1	0	1
Hypertension, Chronic	23	22.2	3	18	1	1
Hypertension, Pregnancy-Associated	31	9.0	14	12	5	0
Eclampsia	2	32.3	1	1	0	0
Incompetent Cervix	45	68.7	13	19	7	5
Previous Infant 4000+ Grams	3	2.6	3	0	0	0
Previous Preterm or Small-for-Gestational-Age Infant	28	19.5	9	16	3	0
Renal Disease	3	4.1	0	1	2	0
Rh Sensitization	5	10.6	0	3	2	0
Uterine Bleeding	16	22.7	5	3	7	1
Other Risk Factor	172	6.2	61	70	35	6

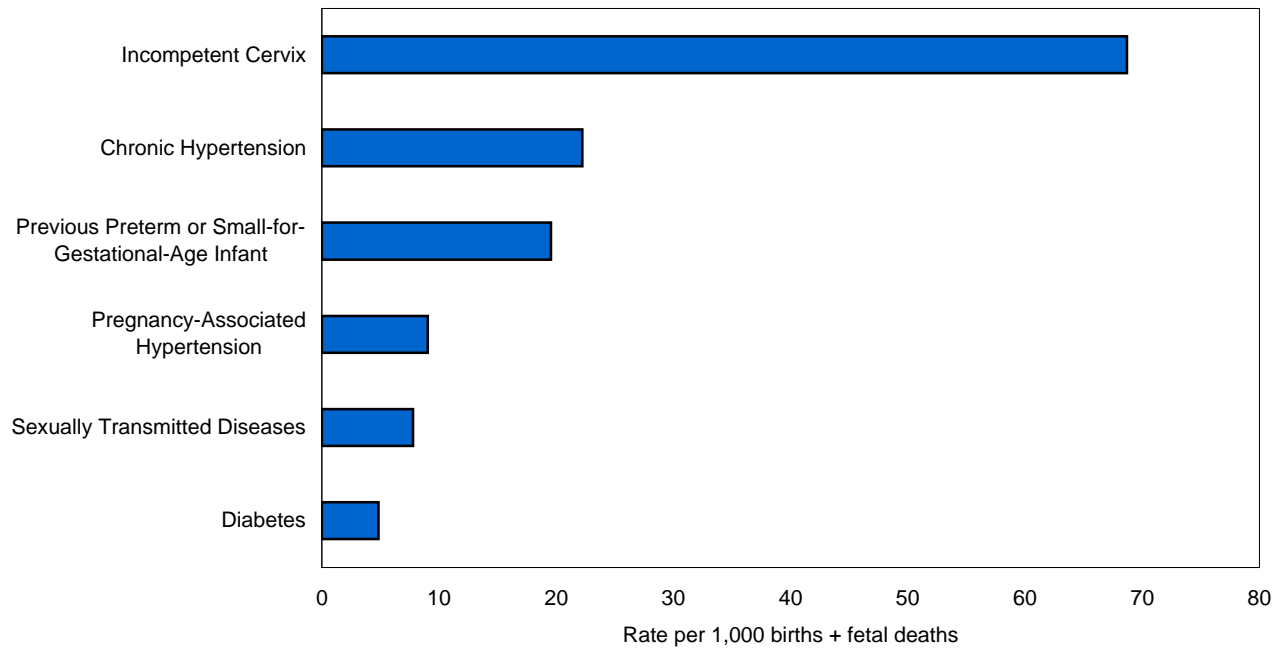
Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

Rates are computed per 1,000 medical risk factor-specific births plus fetal deaths to 20 or more weeks gestation.

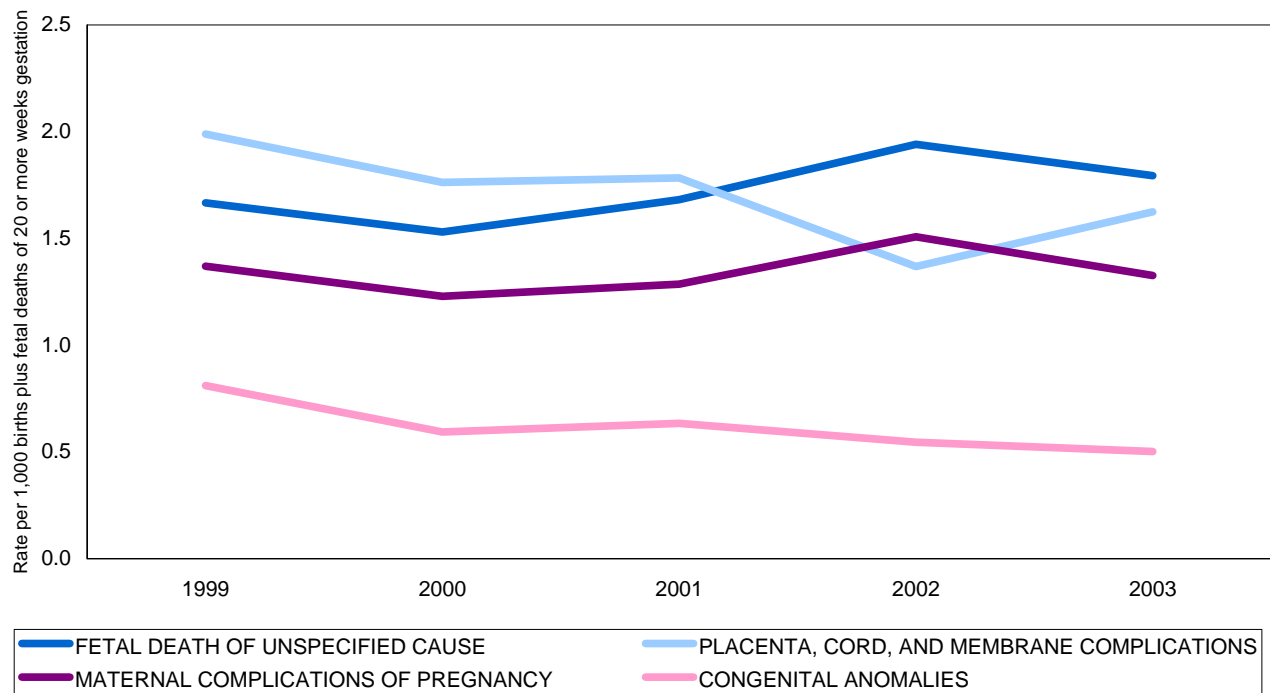
Rates based on fewer than 20 deaths should be interpreted with caution.



**FIGURE F10. FETAL MORTALITY RATES FOR SELECTED MEDICAL RISK FACTORS  
NEW JERSEY, 2003**



**FIGURE F11. FETAL MORTALITY RATES FOR LEADING CAUSES OF DEATH  
NEW JERSEY, 1999-2003**



**TABLE F12. LEADING CAUSES OF FETAL MORTALITY**

**NEW JERSEY, 1999-2003**

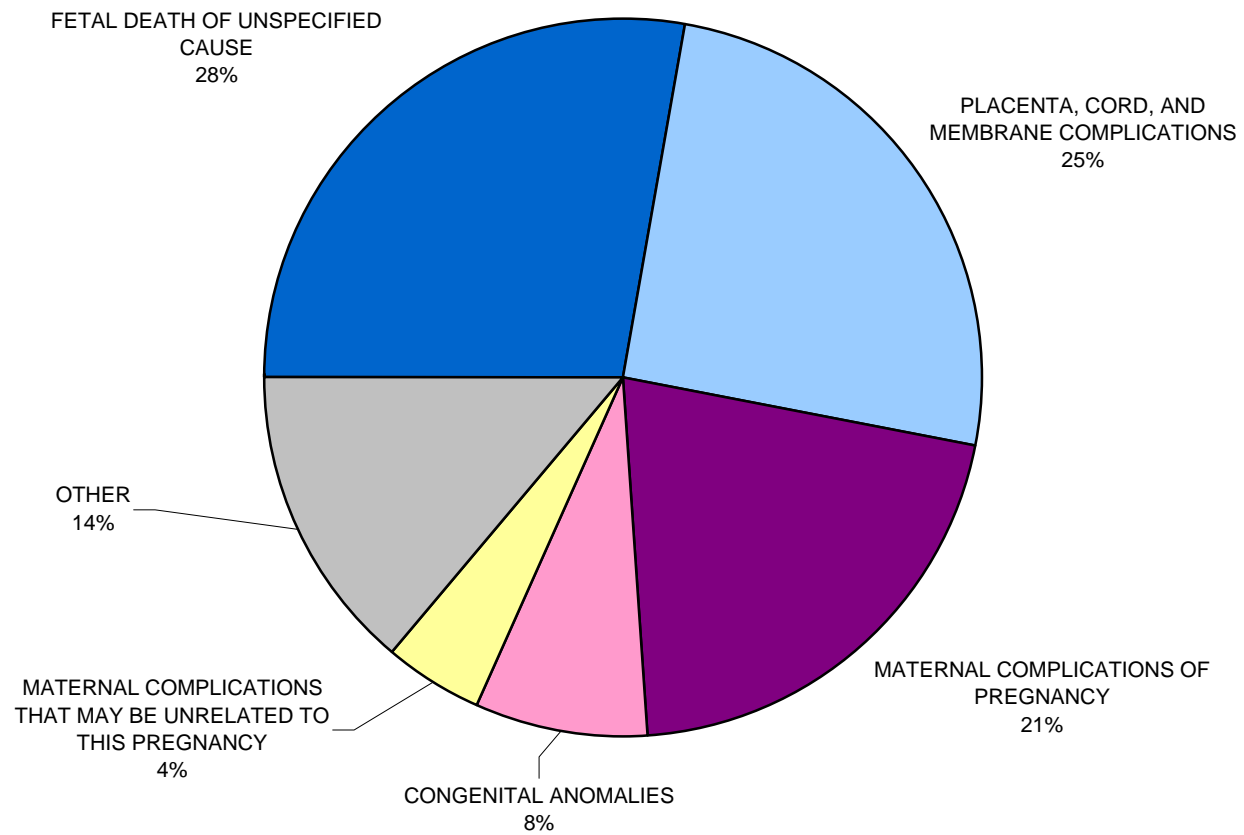
CAUSE OF DEATH	1999				2000				2001				2002				2003			
	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE	RANK	NUMBER	PERCENT	RATE
FETAL DEATH OF UNSPECIFIED CAUSE	2	191	22.8	1.7	2	178	23.2	1.5	2	196	24.0	1.7	1	224	28.5	1.9	1	211	27.9	1.8
PLACENTA, CORD, AND MEMBRANE COMPLICATIONS	1	228	27.2	2.0	1	205	26.7	1.8	1	208	25.4	1.8	3	158	20.1	1.4	2	191	25.3	1.6
MATERNAL COMPLICATIONS OF PREGNANCY	3	157	18.7	1.4	3	143	18.6	1.2	3	150	18.3	1.3	2	174	22.1	1.5	3	156	20.6	1.3
CONGENITAL ANOMALIES	4	93	11.1	0.8	4	69	9.0	0.6	4	74	9.0	0.6	4	63	8.0	0.5	4	59	7.8	0.5
MATERNAL COMPLICATIONS THAT MAY BE UNRELATED TO THIS PREGNANCY		41	4.9	0.4		35	4.6	0.3		38	4.6	0.3	5	42	5.3	0.4	5	34	4.5	0.3
SHORT GESTATION/LOW BIRTH WEIGHT	5	42	5.0	0.4	5	46	6.0	0.4	5	41	5.0	0.4		40	5.1	0.3		33	4.4	0.3

See Technical Notes for ICD-10 codes corresponding to cause groups.

Percents are computed per 100 fetal deaths.

Rates are computed per 1,000 births plus fetal deaths of 20 or more weeks gestation.

**FIGURE F12. LEADING CAUSES OF FETAL MORTALITY  
NEW JERSEY, 2003**



**TABLE F13. LEADING CAUSES OF FETAL MORTALITY BY RACE/ETHNICITY OF MOTHER**

**NEW JERSEY, 2003**

CAUSE OF DEATH	TOTAL		WHITE		BLACK		HISPANIC		ASIAN/ PACIFIC ISLANDER	
	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER	RANK	NUMBER
FETAL DEATH OF UNSPECIFIED CAUSE	1	211	2	71	1	69	1	59	3	12
PLACENTA, CORD, AND MEMBRANE COMPLICATIONS	2	191	1	82	2	55	2	40	1	14
MATERNAL COMPLICATIONS OF PREGNANCY	3	156	3	66	3	53	3	21	1	14
CONGENITAL ANOMALIES	4	59	4	25	5	13	4	18	4	3
MATERNAL COMPLICATIONS THAT MAY BE UNRELATED TO THIS PREGNANCY	5	34	5	16		10		7	5	1
SHORT GESTATION/LOW BIRTH WEIGHT		33		5	4	19	5	8		0
HYDROPS FETALIS		6		3		1		1	5	1

Data for White, Black, and Asian/Pacific Islander do not include Hispanics. Hispanic ethnicity includes persons of any race.

See Technical Notes for ICD-10 codes corresponding to cause groups.